

Economic Policies for Nature Conservation in the UK -

Sites of Special Scientific Interest

By

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Abstract

Title: Economic Policies for Nature Conservation in the UK - Sites of Special Scientific Interest

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This thesis examines the decision process leading to conservation policies in the UK. Focusing on Sites of Special Scientific Interest (SSSIs), it explores the hypothesis of conventional economic theory that economic regulation is determined by interest groups competing for political influence (Becker, 1983). During the 1980s, increased public awareness of issues concerning nature conservation has resulted in a tightening of legislation. This resulted in substantial increases in budget allocation towards these measures to compensate for the transfer of private property rights from individual farmers and landowners to the public to internalise externalities arising from current agricultural practices.

In order to examine the above research issues an integrated survey was conducted which focused on three target populations: farmers; local organisations; and, policy-makers. It was found that the overall framework of national UK policy is determined at the European level. UK based interest groups then negotiate within this framework to determine the UK's interpretation and consequent implementation of EU Directives. The research illustrated that a purely economic approach, which focuses on the competition between interest groups over the redistribution of public resources, is insufficient because it abstracts from the complexity of the policy-making process itself. While interest groups were shown to provide the government with essential information, it was demonstrated that the government consists of individual decision-makers (civil servants) who have their own agendas.

Individual farmer concerns over SSSIs were shown to focus on the imposition on their private property rights and freedom to derive benefit streams from their land. These concerns were successfully expressed by farming and landowning organisations and resulted in the reform of legislation in 1990 which sought to devolve decisions over implementation of policy to local regions.

It was found that the policy-making process relies on a small number of key interest groups. The conflict between the private interests of farmers and landowners and the public interests of environmental and conservation groups was identified. The bias towards status quo private property rights in the UK limits the extent to which conservation and environmental interests can be secured in land use policy. However, the influence of the EU, which has a stronger commitment to environmental policy than the UK national government, will increasingly challenge this bias in favour of public conservation and environmental interests. Finally, it was found that a multi-disciplinary approach is required to secure a comprehensive understanding of policy for conservation of natural resources and thus successful policy implementation.

Key words: SSSIs; property rights; farmers interests; interest groups; conservation policy; policy-making;

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List of Abbreviations ¹

ADAS	Agricultural Development Advisory Service
ADP	Agricultural Development Programme
ATB	Agricultural Training Board
BTCV	British Trust for Conservation Volunteers
CC	Crofters Commission
CLA	Countryside Landowners Association
COPA	Committee of Agricultural Organisations (English translation)
CPRE	Council for the Protection of Rural England
DG(VI)	Directorate General (Agriculture)
DG(XI)	Directorate General (Environment)
DoE	Department of the Environment
ESA	Environmentally Sensitive Area
EU	European Union
FoE(S)	Friends of the Earth (Scotland)
FoE(UK)	Friends of the Earth (United Kingdom)
FWAG(S)	Farming and Wildlife Advisory Group (Scotland)
FWAG(UK)	Farming and Wildlife Advisory Group (United Kingdom)
ITE	Institute for Terrestrial Ecology
JNCC	Joint Nature Conservation Committee
MAFF	Ministry of Agriculture, Fisheries and Food
MEP	Member of European Parliament
NFU(S)	National Farmers Union (for Scotland)
NGO	Non-Governmental Organisation
NT(S)	National Trust (for Scotland)
NC	Nature Conservancy
NCC(S)	Nature Conservancy Council (Scotland)
OFC	Orkney Field Club
OIC	Orkney Islands Council
PDOs	Potentially Damaging Operations
PES	Public Expenditure Survey
RSNC	Royal Society for Nature Conservation
RSPB	Royal Society for the Protection of Birds
SAC	Scottish Agriculture College
SCP	Scottish Conservation Projects
SCU	Scottish Crofters Union
SLF	Scottish Landowners Federation
SNH	Scottish Natural Heritage
SOAFD	Scottish Office Agriculture and Fisheries Department
SOEnD	Scottish Office Environment Department
SSSI	Site of Special Scientific Interest
SWCL	Scottish Wildlife and Countryside Link
SWT	Scottish Wildlife Trust
WCL	Wildlife and Countryside Link
WWF	World Wide Fund for Nature

¹Appendix V includes a description of all the interest groups and semi-private organisations mentioned in the results.

1 Introduction to Economic Policies for Conservation of Nature

In 1979 the British government had no environment policy and there was little widespread understanding of environmental issues. In the manifestos of the major political parties it was low on the agenda and policy was not comprehensive. During the 1980s the environment was seen to rise on the policy-making agenda from being 'humdrum', (Mrs Thatcher 1979), to '*one of the greatest challenges of the late twentieth century*' (Mrs Thatcher September 1988, House of Commons). In relation to defence, social security, education, industry and economic policy, the environment is still a minor issue on the British political agenda. However, environmental problems, particularly nature conservation, have experienced considerable attention which have resulted in substantial increases in Treasury budget allocation. The culmination of this attention to environmental issues was the White Paper, of September 1990, '*Our Common Inheritance*' (HMSO, 1990).

The key question in this thesis is, given the lack of expressed market demand by society, how does the government determine the supply of conservation of natural habitat to attain an optimal level of societal welfare.

Natural heritage is characterised by public goods such as biodiversity, landscape, clean water etc. which are 'free' goods or have a zero price on economic markets. The level of demand for such goods cannot therefore be expressed on the market in the usual way consumers express their demand for 'normal' goods such as cars. Thus demand remains unquantified. Public support is principally reflected in the substantial membership of voluntary organisations such as the Royal Society for the Protection of Birds (RSPB) and the World Wide Fund for Nature (WWF).¹

¹ Approximately five per cent of the British population were estimated to be members of environmental organisations in the early 1980s and this was estimated to have risen to approximately eight per cent by the end of the decade (McCormick, 1991). In addition, the Green Party enjoyed a three-fold increase in its membership and won a 15 per cent share of the European seats in the 1989 EU election.

The Wildlife and Countryside Act (1981) embodies the principal regulation of economic activity for the conservation of nature, known as Sites of Special Scientific Interest (SSSIs). During the 1980s there was extensive designation of economically marginal areas of the UK as SSSI. Local economic and agricultural interests were apparently being threatened by a national scientific or conservation/environmental interest. This led to a conflict of interests in which local interests competed with the conservation agency (representing the national interest) to minimise the economic impact of the designation of SSSIs. The perception that conservationists in the South East of England (a minority interest) were driving the conservation movement increased the feeling of local interests being over-ridden by a national (minority) interest and thus exacerbated conflict. This conflict was paralleled at the national level during the debate of the Wildlife and Countryside Act in Parliament. The question as to whose welfare is being protected through such policies must be raised if conservation of natural habitat is sought by a minority interest (that is, members of environmental and conservation groups).

Conservation agencies work within a legal framework which is based on scientific criteria. Therefore it would appear that scientific criteria form the basis of the supply of conservation goods given that the agency submits a rolling three year request for funding based on their requirements. However, the actual budget allocated to conservation agencies does not allow them to meet scientific criteria fully and they are constrained within financial limits. Given that budget allocation is not totally based on the requirements to meet scientific guidelines and that society does not provide any clear guidelines as to the level of demand (other than the pressure of influential interest groups), on what basis does government allocate scarce resources to conservation of natural heritage?

Many people in Britain associate the term 'environment' with the countryside and it is to this area of environmental protection that they turn their support.

"[In Britain,] *the most controversial and widely debated environmental issue of the post war years has been the threat posed to the countryside by modern farming*" (McCormick, 1991).

This has been particularly true since the passing of the Wildlife and Countryside Act of 1981. The focus of debate on the disagreement between the agriculture and conservation and environmental lobbies not only highlighted the influence enjoyed by the agriculture lobby in the Ministry of Agriculture (MAFF) and the relative lack of influence of conservation groups (a subsection of environmental groups concerned with wildlife and countryside issues) but also illustrated the conflict of interests which is proposed in this thesis to be the driving force of conservation and environmental policy in Britain. Throughout the thesis the term 'environmental group' will relate to groups with more general environmental interests and 'conservation group' will relate to groups with a specific interest in the countryside. With respect to agriculture interest groups, 'agriculture' and 'farming' are used interchangeably.

In exploring the rationale for allocating public resources to nature conservation objectives, this thesis brings together the rise of environmental and conservation interests; the influence of the agriculture lobby; and the significance of the conflict of interests between agriculture and conservation to government decision-making and the outcome of conservation policy.

This research also addresses the question of the shifting balance of conservation interests with established agricultural interests in the policy community, the conflict of interests at the local and national level, the linkages between the two levels, and the nature of the actual interests in conflict. The lack of formal information about conservation policy decision-making and the influence of agriculture and conservation interest groups raises questions as to who is determining policy and in whose interests policy is being established. Society has no clear mechanism to signal the socially optimal level of output of conservation 'goods' and distortions in agricultural markets caused by CAP have exacerbated some environmental problems. Economists describe the environment as a public good and environmental (and conservation) problems are considered to be a result of market failure. As a consequence of this line of reasoning government is increasingly pressurised by interested parties to intervene.

It appears that a policy elite is determining conservation policy when one considers the following factors: firstly, the membership of environmental and conservation groups is greater than the membership of all the political parties added together; and secondly, that membership is dominated by the middle and upper income groups of UK society. If this policy elite is determining environmental and conservation policy, questions are raised as to whose economic and social well-being is being protected. It would appear that the national interest is therefore being determined by a conflict of interest between key environmental, conservation, agriculture and landowning interest groups.

In Chapter Two the roots of the conservation movement and early regulation designed to address conservation problems are discussed. The issues which emerged during the debate of and subsequent implementation of the Wildlife and Countryside Act (1981) are then described. The development of this economic regulation for nature conservation and particularly the designation of Sites of Special Scientific Interest (SSSIs) provides the entry point to the identification of the key agriculture/conservation policy issues. These in turn, provide an essential basis from which to establish the research programme of the thesis which is presented as the final section in Chapter Two. Chapter Three explores economic regulation and the conflict of interests in the theoretical framework of Public Choice Theory. Beckers neo-classical theory of Competition Among Pressure Groups for Political Influence (1983) is described in which the competition between pressure groups is proposed as being the main determinant of policy decisions. The limitations of Beckers neo-classical theory are discussed and an alternative paradigm is proposed in Chapter Four. This sets forth what is considered to be a more appropriate and comprehensive framework within which decisions for regulation of agricultural activities for the protection of the natural environment can be understood. The methodology for the primary research conducted during this thesis is described in Chapter Five and in Chapter Six the results are presented. The alternative paradigm is validated in Chapter Seven by examining the theory in the light of the results. While it is recognised that in social science no hard and fast laws of policy-making can be established, some overall conclusions can be drawn in terms of the incremental nature of decision-making for conservation, the difference between farmers/landowners and conservationists interests, and the competition over the re-allocation of property rights amongst landowners and the public. The implications for future development of economic policies for nature conservation drawn from the above conclusions are presented in Chapter Eight, with suggestions for future research.

2

The Politics and Economics of Nature Conservation

2.1 Introduction to the politics and economics of nature conservation

The principal focus of this thesis is economic policy for the conservation of nature. In particular, the research concentrates on the decision-making process involved in developing conservation regulation such as the 1981 Wildlife and Countryside Act which requires the designation of Sites of Special Scientific Interest (SSSIs). There is little formal knowledge of how policy decisions that address environmental issues (including conservation of natural resources) in Britain are made. This thesis addresses the context and framework within which financial resources continue to be allocated to nature conservation and seeks to identify what or who is the driving force behind such policy decisions. Through the examination of marginal changes to the contemporary expenditure process it is possible to explore the relation between policy and expenditure and vice versa and thus make an attempt to account for continuity and change.

Heclo and Wildavsky (1977) propose the determinants of public expenditure to be changes of or within governments, the economic climate (which '*shades into political climate*' (Heclo and Wildavsky, 1977)), public fashion and the respectability of the subject under consideration. The Political administration is a kind of political community that is united by "*ties of kinship and culture*". Private interests are included within the community and may also seek to influence from the outside. At the

"vortex of all the confidences, calculations and climatic assessments...stands the Treasury...Understanding the expenditure process begins at the Treasury" (Heclo and Wildavsky, 1977).

Finances are an integral part of the substance of any policy because departments have to prioritise within a given expenditure total though there remains a fairly large and formal freedom in expenditure. The Treasury's examination of the details of departments' budgets allows it to oversee general policy direction and it may also

choose to affect it by changing expenditure totals.

"The search for existing policy inevitably becomes entangled in questions of interpreting money sums" (Heclo and Wildavsky, 1977) Heclo and Wildavsky continue to explain that,

"the link between expenditure and policy is complex and (largely) covert" (Heclo and Wildavsky 1977:pp346-347).

Within this chapter both expenditure and policy for nature conservation are examined and the research questions which consequently arise are described in the final section.

A brief account of the rise of conservation and environmental interests and the development of conservation legislation during the twentieth century is given and is discussed in relation to the farming lobby, past and present. This is followed by an examination of contemporary conservation policy, its legislative framework and the financial provisions made for nature conservation. The Wildlife and Countryside Act of 1981 is the main piece of legislation which establishes nature conservation on the statute books. The conflict of interests during the debate of the Wildlife and Countryside Bill and the subsequent implementation of the Act provides the basis for the following discussion of the conservation and agricultural lobbies which sought, and continue to seek, representation of their interests at the policy-making level.

Existing property rights favour landowning and agricultural interests over and above the wider public interest. These include many facets such as protection of the wider environment, conservation of nature, maintenance of 'traditional' landscapes and rural recreation. It is proposed by the author that the conflict between these lobbies essentially centres on the view (held mainly by landowners and farmers) that the status quo property rights for agriculture should be maintained and the counter view that advocates a redistribution of property rights towards the wider public interest for environmental reasons. It is also proposed that this conflict has been the major factor shaping the construction, direction and extent of nature conservation policy in the UK. It is the purpose of this thesis to determine whether this is so and if it will continue to do so in the future. From the research undertaken in this study implications may be drawn as to the actual process of decision-making for policy, the contemporary issues of existing policy and the likely direction of future policy for nature conservation with reference to agricultural land use.

2.1.1 Environmental policy

UK environmental policy not only reflects the government's environmental agenda, but also wider environmental concerns expressed through EU directives and international conventions and agreements. Within this framework nature conservation is an important, and to some extent increasing focus of attention with, for example, the development of the international Rio Biodiversity Treaty, the EU Species and Habitats Directive and the 1981 Wildlife and Countryside Act.

In 1990 the UK government produced a White Paper on *"Britain's Environmental Strategy"* entitled *'Our Common Inheritance'*. In many respects the broad thrust of environmental conservation was encapsulated in the opening quote of this publication, taken from John Stuart Mill's *'Principles of Political Economy'*:

*"Is there not the Earth itself, its forests and waters, above and below the surface?
These are the inheritance of the human race...
What rights, under what conditions, a person shall be allowed to exercise
over any portion of this common inheritance cannot be left undecided.
No function of government is less optional than the regulation of these things,
or more completely involved in the idea of a civilised society."*

(HMSO, 1990:p.1).

It is clear from the inclusion of Mill's quotation that 'property rights' and 'externalities' are essential elements of environmental policy and it is these issues that form the basis of economic policies for the conservation of nature. Following Mill's introductory quote the Government describe their White Paper as looking *"at all levels of environmental concern"* and emphasise that it is intended to address *"what the Government has done and proposes to do"* with regard to protecting *"our common [environmental] inheritance"* (p.8).

Figure 2.1 The growth of regulation for environmental protection ¹

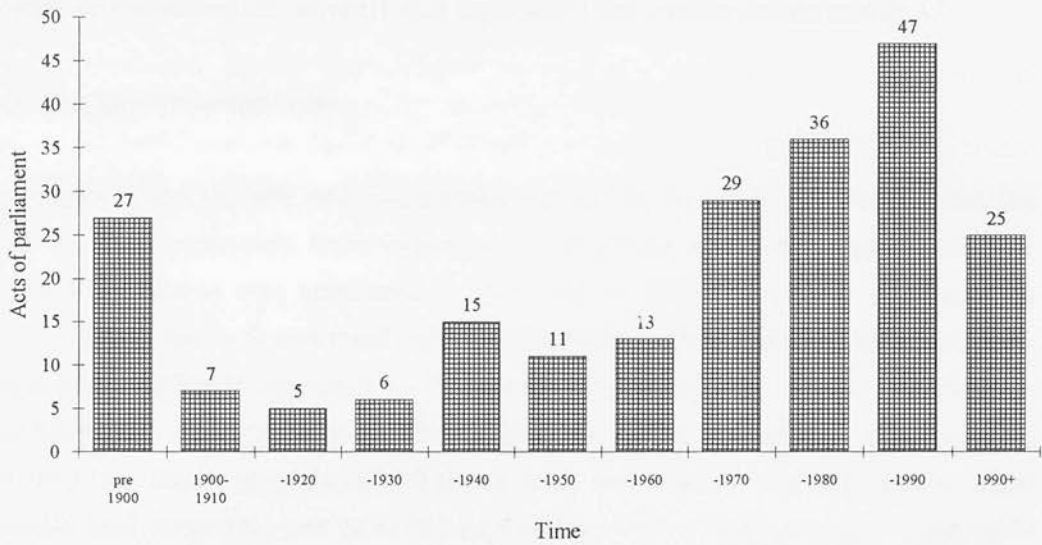


Figure 2.1 above illustrates the increase in government legislation during the period 1800 to 1994. The passing of laws for nature conservation has gone through a series of phases which have seen the gradual increase in numbers of laws passed year on year. In the 17th and 18th centuries, law focused on the conservation of game birds and wild birds, and the preservation of hares and prevention of poaching. Between 1900 and 1930 there were few laws passed and these focused on protection of birds and the National Trust Act. During the period 1930 to 1980 laws dealt with land drainage, forestry, hill farming and agriculture. The final and current phase has dealt with conservation and enhancement of the natural heritage and a more holistic environmental protection.

There has been a steady increase in governmental intervention up to the second world war and this was followed by an exponential increase in the 1970s and 1980s. This rise over time may be correlated with the rise in UK economic activity. The increase in secondary impacts (negative externalities) on the environment is associated with a significant increase in production and consumption in the UK. In parallel with this there has occurred an expansion of the affluent middle class who have had the time and influence to address environmental and conservation issues. This has manifested itself through a significant increase in the membership of environmental interest groups and has provided the source of influence for those groups seeking to protect

¹ Source: Reid, C., (1994)

species and their habitats.

2.2 Rise of conservation interest and legislation for nature conservation

2.2.1 The governmental role

The origins of the Wildlife and Countryside Act can be traced to the 1940s when the threat to the countryside from industrial development had been recognised. The Barlow Commission was appointed in 1937 and in 1940 it reported a concern to improve living standards and rectify the maldistribution of industrial development with a rigid preservationist approach to the countryside. The Scott Report of 1942 on Land Utilisation in Rural Areas reinforced Barlow's recommendations. These reports enshrined two fundamental beliefs: i) that a town and country planning system could reconcile land ownership and resource exploitation with a well-managed countryside for the public good; and, ii) a prosperous farming industry would preserve both the rural landscape and rural communities. The result was the 1947 Town and Country Planning Act. Despite being one of the world's most comprehensive planning acts it accorded farming and forestry a pre-emptive claim over all other uses of rural land. Farming and forestry were made exempt from planning control.

Sir Arthur Hobhouse chaired the committee set up by the Ministry of Town and Country Planning to review the case for and against National Parks, and access to the countryside. The campaigns for National Parks and Nature Reserves ran separately but parallel during the 1940s and the division was in Hobhouse's decision to establish two sub-committees: the Wild Life Conservation Special Committee, chaired by J. S. Huxley; and the Footpaths and Access sub-committee, chaired by Hobhouse himself. The latter committee sought to ensure the development of the National Parks and was in response to the call for amenity and access (Evans, 1992, Chapter Four). The Wild Life Conservation Special Committee however, was set up to consider nature reserves. Naturalists and conservationists would not 'come together' with the amenity lobby and advocated that nature reserves could not prosper in conjunction with public access. Huxley's report, published in 1947, outlined the basis upon which present day nature conservation is founded.

The series of Nature Reserves were to,

"...preserve and maintain...places which can be regarded as reservoirs for the main types of community and kinds of plants and animals represented in this country, both common and rare, typical and unusual, as well as places which contain physical features of special or outstanding interest...Considered as a single system, the reserves should comprise as large a sample as possible of all the many different groups of living organisms, indigenous or established in this country as part of its natural flora and fauna" (Huxley, cited in Evans, 1992:p76).

The Nature Conservancy (NC), established in 1949 as an executive and advisory body, was given the responsibility for administering nature reserves. In addition it had to notify the local planning authorities of Sites of Special Scientific Interest (SSSIs) - areas apart from the nature reserves of high quality natural or semi-natural flora and fauna, or containing rare or endangered species or with key geological or physiographical features.

The NC was empowered to own and manage land, establish regional structures and conduct research. The result of the NC being established as a separate organisation from the planning authorities was that nature conservation became a scientific matter to be administered by scientists. The NC could notify the local planning authority of the designation of a Site of Special Scientific Interest and in return the planning authority had only to notify the NC before determining a proposal for development affecting an SSSI. Landowners and occupiers were not even made aware of the conservation value of their land, their actions being assumed to be environmentally benign.

In 1973 the role of the NC was split between two organisations. The Nature Conservancy Council (NCC) became the new government agency to deal with nature reserves and SSSIs and the Institute of Terrestrial Ecology (ITE) took on the research role of the former NC. 1990 marked the further division of the NCC into three country agencies for England, Scotland and Wales. In Scotland the NCC for Scotland has been amalgamated with the Countryside Commission for Scotland into a united body to deal with scientific and recreational countryside issues. This is known as Scottish Natural Heritage (SNH). This amalgamation has also occurred in Wales and is currently being proposed for England in order to achieve organisational consistency.

2.2.2 The conservation and environment lobby

Conservation of nature has evolved over a long period of time and government has sporadically intervened and implemented varying degrees of economic regulation in a range of markets that impact the environment. While it is not the purpose of this thesis to give a history of nature conservation in Britain it is necessary to identify the roots of the conservation lobby, status quo property rights and governmental regulation as a response to the growing awareness of the secondary impact of economic activity on nature.

The work of amateur field naturalists in the 16th, 17th and 18th centuries led to the development of modern botany, zoology and other life sciences. For some individuals this marked the beginning of a rediscovery of the place of the human race in nature and coupled with the increase in access to transport in the 19th century, made the countryside more accessible to the Victorians seeking education, leisure, self-improvement and escape from the horrors of urban life.

In the mid-18th century, the wildness of the Lake District became increasingly appreciated and an enthusiasm for mountain scenery and its relative desolation was growing. Prominent in the movement to protect the landscapes and nature of the Lake District were Ruskin, William Morris, Thomas Carlyle and other contemporary social reformers, such as Octavia Hill and Cannon Raunsley who were later to become founders of the National Trust (NT, 1894).² Natural history societies grew as individuals became more interested in the study of nature and as a result there developed an increased interest in the protection of nature. As naturalists learnt more about nature they also understood more about the threat to wild plants and animals from development, such as railways and increased public access.

The emergence of nature trusts and conservation groups in the nineteenth century marked a shift in the public consciousness of nature and the countryside, with a growing sense of the vulnerability of wildlife. The period of industrialisation was seen as threatening and saw the formation of many small groups. The Society for the Protection of Cruelty to Animals (SPCA) was founded in 1824 and given royal charter in 1840 (RSPCA). This illustrated a growing recognition of the kinship of humans and animals and it was from this crusade against cruelty to domestic animals

² In contrast it is interesting to note that the National Trust for Scotland was established in 1931 by a number of Scottish lairds who felt that the National Trust was ignoring Scotland.

that the movement to protect wildlife followed. Cruelty to animals was seen as an expression of the most primitive and savage elements in human nature and so the movement to save wildlife was also seen as preserving the moral fabric of society. In 1889 the Society for the Protection of Birds (SPB) was established primarily to resist the killing of wild birds to provide plumage for women's fashions. This was a most popular protectionist cause and was very significant in introducing the concept of 'protection' into natural history. The SPB received royal charter in 1904 (RSPB) and was the first major voluntary organisation followed closely by the National Trust (NT). The Trust was reformed as a body corporate by Act of Parliament in 1907 which enabled it to declare land inalienable, thus safeguarding it in perpetuity. The concept of the Trust had arisen from the world's first national environmental group, The Commons, Open Spaces and Footpaths Preservation Society established in 1865 which had found that its inability to buy land restricted its battle to save common lands. 1913 saw the establishment of the Society for the Promotion of Nature Reserves followed by the British Ecological Society in 1914. It is evident, therefore, that landownership and particularly the establishment of nature reserves were seen to be key instruments for nature conservation even at the turn of the century.

The movement then took on a more political stance as the Council for the Preservation (now Protection) of Rural England (CPRE) was founded (1926). The CPRE, a mainly urban based group, was made up of a small number of influential intellectuals which signalled the emergence of rural preservation as a significant force in British politics. By 1936 the Joint Standing Committee for National Parks along with the Friends of the Lake District, CPRE and the newly established Ramblers Association shared a breadth of support from the general public.

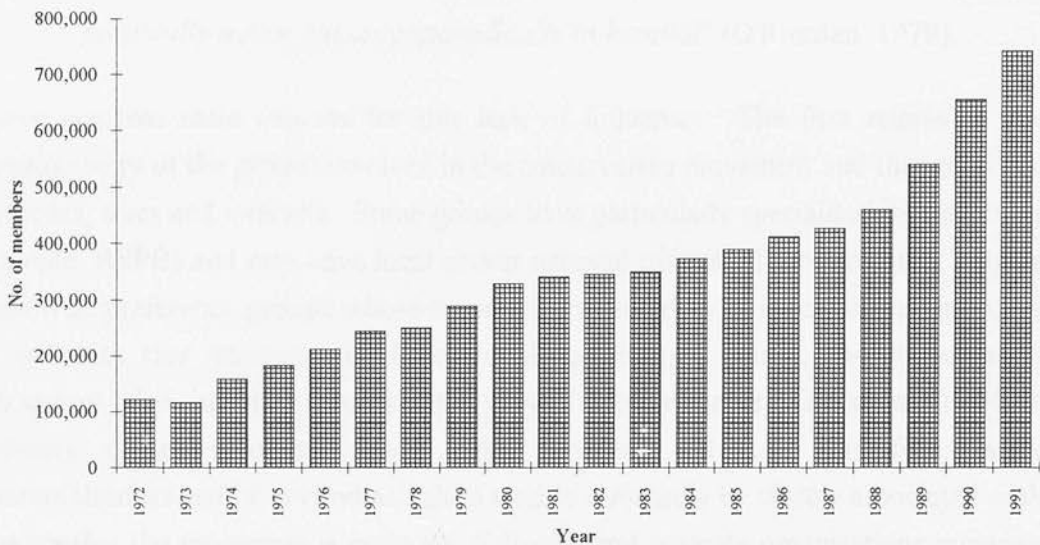
Therefore, it can be seen that the gradual evolution of groups developed from a number of rather disparate ethical, aesthetic, scientific and utilitarian interests which came together in the *"uneasy coalition of the modern conservation movement"* (Evans, 1992). The movement began with a middle-class interest in landscape followed by the study of natural history, and this evolved to include rural recreation and public access, species protection and protection of habitats. Although the foundations of the British conservation movement lie in the period 1860 to 1910 it has only become an appreciable political force much more recently.

Cox (1988) identifies 1910 - 1970 as the 'Scientific period'. Naturalists were extending their interest from classification of plants and species to interrelationships

between plants and species. Ecologists were concerned to develop and institutionalise their discipline through their involvement with nature conservation and their efforts had a major impact on the implementation of policy in the post-war period.

Following growing awareness of the destruction of wildlife habitats there occurred heightened interest in nature conservation in the 1970's. During the period 1967 to 1980 National Trust membership grew from 159,000 to almost one million. Between 1971 and 1991 RSPB membership increased from 122,000 to 742,497 as shown in Figure 2.2 below.

Figure 2.2 Increase in RSPB membership 1972 - 1991³



Interests were expanding from local to global with an increasing perception that the threat to wildlife and countryside were only symptoms of the wider economic and social questions that needed to be addressed.

Following the establishment of Greenpeace in the US in 1969 and Friends of the Earth (FoE) in Canada in 1972 the base of the conservation movement broadened to include a new kind of environmental interest which advocated a more holistic approach to environmental protection. This new environmental lobby was characterised as radical and very active.

³ Source: D Gordon, pers comm, RSPB, Bedfordshire 1991

Today the differences in the approach of environmental groups and conservation groups remains though the extremes on the movement continuum are generally perceived to be less far apart.

Despite the size and extent of the conservation movement since the 1970s its influence has been limited.

"Perhaps the greatest failing of environmental groups in the 1970s was their inability to translate their massive numerical support into an appreciable political force" (Jordan and Richardson, 1987:p187).

O'Riordan described groups as,

"politically active but only sporadically influential" (O'Riordan, 1979).

There are two main reasons for this lack of influence. The first relates to the heterogeneity of the groups involved in the conservation movement and the variety of purposes, sizes and interests. Some groups have particularly specialised interests (for example, RSPB) and may have local and/or national offices. There are other groups known as preference groups whose members are united by common tastes, attitudes or pastimes (for example, the Ramblers Association). Finally, the conservation movement also includes 'promotional groups' (for example, Greenpeace) which promote causes involving social and/or political reform. Therefore, while conservationists and/or environmentalists tend to outwardly be closely associated with one another the movement is made up of diverse and separate organisations pursuing a number of similar and differing goals (Lowe and Goyder, 1983). Although, there are umbrella organisations such as the Environment Council and Wildlife and Countryside Link (WCL) who liaise and exchange information with other groups, the Link organisations tend to provide a network organisation rather than any uniting body as groups generally are unwilling to give up their authority to umbrella organisations. There is a separate Link organisation in Scotland known as Scottish Wildlife and Countryside Link (SWCL) and there is a limited but growing degree of liaison between Wildlife and Countryside Link and SWCL.

The second reason for groups 'lack of appreciable political force' is that environmental and conservation groups are not seen by the government as being integral to the working of the economy in the same way as the National Farmers Union (NFU). The effective groups tend not to be radical or confrontational but more 'conservative' such as the National Trust (for Scotland) and the RSPB.

As a consequence of the upswell of public support for environmental and conservation pressure groups in the 1980s, the environment has gained a higher profile in government legislation. That is not to say however, that this influence has yet been reflected in terms of active environmental protection. It is arguable, therefore, that the real political influence of environmental (and conservation) interest groups has resulted in little more than political rhetoric; this proposition is explored within the boundary of this thesis.

2.2.3 The agriculture and landowning lobby

It is evident that the British countryside, as owned and managed by farmers and private landowners, has enjoyed and continues to enjoy a position of particular esteem in the eyes of the general public in the UK.

"The countryside and the rural ethic hold a place in the British psyche that is comparable to the position of forests in Germany or wilderness in the US" (McCormick, 1991:p70).

Cox, Lowe and Winter (1985) identify the 'exceptionalism' that agriculture experiences in its exemption from many of the laws that apply to other industries. Agriculture is the only industry exempt from paying rates and which has its own education system. Subsidy and trade protection for agriculture are proportionately greater than for any other industry and Grant argues that,

"all this assistance from the state has been provided without any real reduction in the farmer's autonomy in making decisions about the way in which his or her farm is run" (Grant, 1989:p135).

This 'exceptionalism' is based in the post-war settlement in agriculture established in the 1947 Agriculture Act which intended to secure a range of objectives such as a reliable and cheap supply of domestic food. The main new mechanism introduced in the Act was the setting of guaranteed prices through an annual price review by the Ministry of Agriculture, Fisheries and Food (MAFF) in consultation with the NFU. The agricultural policy community remains a relatively closed one which centres on the relationship between MAFF and the NFU and occasionally the Countryside Landowners Association (CLA).

"The NFU has...been very sophisticated in its adjustment to changing circumstances. It has not clung to existing policies when it is apparent that they no longer command political support...Similarly, the NFU has been able to accommodate pressure for new environmental controls, although it is perhaps the CLA that has been remarkable for its preparedness to countenance a major re-think of the system of agricultural support to achieve rural policies of greater economic, environmental and political sustainability" (Cox, 1988).

"It should be noted, however, that the CLA's proposals seek to preserve 'exceptionalism' by continuing to exclude planning controls over agricultural operations" (Grant, 1989:p139).

In contrast to the wide ranging and disparate nature of the conservation movement the farming lobby is essentially characterised by one organisation - the National Farmers Union (NFU) which was founded in 1908. Despite the apparent increase in influence of the conservation lobby the NFU is still in an influential and privileged position today. There exists a close and continuous relationship between NFU, the CLA and MAFF. The NFU has been seen to be of central importance to government and the performance of the economy and the government has sought to engage its co-operation in administering agriculture policy. Agriculture and landowning groups tend to be involved at the pre-public stage of policy formulation, unlike conservation groups which often means an uphill struggle for them at a later stage. By the mid-1980s the NFU was one of Britain's most powerful and efficient interest groups. With over 80% of British farmers being members it is considered to be more of a trade union than an interest group. Furthermore, the influence of the NFU has remained independent of political parties enjoying a privileged and insider position with all post war governments.

In Scotland similar relationships exist between the sister organisations, the National Farmers Union for Scotland (NFUS), the Scottish Landowners Federation (SLF) and the Scottish Office Agriculture and Fisheries Department (SOAFD). This is not well documented in published literature and the relationships within the agri-conservation policy community in Scotland and across policy communities in England and Scotland will be examined in the research of this thesis.

During the 1980s the NFU and CLA have emphasised the positive conservation measures of their members rather than questioning the statistics on habitat destruction. Cox (1988) argues that the farming and landowning lobbies retained much ground in the Wildlife and Countryside Act 1981. The lobby established the

choice of 'a once and for all' or 'annual' compensation payments which has considerable implications for the public costs of conservation. The lobby also established a three month period where owners could inform the NCC of their intention to carry out a Potentially Damaging Operation (PDO). The basis of the 1981 legislation was still voluntary.

The Farming and Wildlife Advisory Group (FWAG) was set up in 1969 by MAFF, NFU, the Royal Society for Nature Conservation (RSNC) and the RSPB to promote a bridge between farming and conservation through regular conferences. This defined a moderate middle ground and gave more influence to the establishment oriented and more conservative conservation groups (e.g. RSPB and RSNC), while marginalising the more radical groups which had pressed for agriculture policy reform such as the Ramblers Association and CPRE. Contemporary membership of FWAG continues to be of the relatively conservative pressure groups.

The future influence of the farming lobby is less certain than its past influence for a number of reasons. European Union membership and the sectoralisation of farming interests has provided the scope for potential future sub-factions being wooed by conservation groups (for example, crofters and hill farmers). There is also a new climate of public opinion since 1981 which is more supportive of a rational countryside policy. This change has come about because of the increasing costs of CAP; the success of the conservation lobby in highlighting the changes occurring in the countryside; the increase of populations in rural areas mainly because of improved transport and communications linkages; and also because of public health scares over food production. An example of the latter is egg production and salmonella infection, and Bovine Spongiform Encephalopathy (BSE or mad cows disease). This has contributed to a general fall in public faith in farmers and farming. MAFF set up an Environment Co-ordinating Unit in 1984 and started to review the activities to which it may grant financial aid. This was described by Evans as more like "*subtle foot-shuffling*" (Evans, 1992:p192) due to changing circumstances than any about turn by MAFF. However, despite this widespread fall in public support, financial assistance to agriculture continues and looks set to continue in some form or another. One particularly representative example of the entrenchment of agricultural interests over and above other interests illustrated is the debate over nature conservation, and more precisely the debate over and implementation of the Wildlife and Countryside Act (1981) which is discussed in more detail in sections 2.3 - 2.6.

Cox *et al* (1985) found MAFF to be the least accessible and most unreceptive government department to environmental groups.

"The [agriculture] policy community has remained closed to environmental interests, who have not been given consultative status. MAFF has responded to changes in public opinion with a combination of apparent disregard and studied gradualism, consistently working to affirm the existing order, defending meanwhile its distinctive administrative territory" (NCC, 1986b:p193).

In addition to MAFFs apparent 'disregard of environmental interests' Cox points out that,

"the farming lobby has sought strenuously to maintain the integrity of the agricultural policy community by expanding the range of issues covered by established corporatist arrangements" (Cox, 1988:p336).⁴

This supports the view of the operation of FWAG *"as an informal and conservation-minded version of ADAS"* (NCC, 1986b:p199).

Traditionally the unity of the farming lobby has generally left little scope for the effective deployment of coalition tactics by conservation groups. However, this unity has been placed under considerable strain from a number of quarters and this has helped to create a political space for conservationists. The increased specialisation following EU membership has had a profound impact on the NFUs internal politics ('horn' (livestock) versus 'corn' (arable); the CAP system has favoured arable). Establishment of FWAG is a good example of a coalition or bridging of interests but even this has been confined to the middle ground of conservation interests and has not expanded into wider environmental concerns of agricultural activities.

2.2.4 The conservation and farming lobbies in competition

The above discussion of the conservation and the farming lobbies allows an assessment to be made of the existing political market place. There is a notable distinction between the private interest (farming) group and the public interest (environmental or conservation) group. The former seek to advance the well being of their own members (trade unions and professional associations) and the latter appear more altruistic in motivation and aim to improve the collective condition of society. O'Riordan (1979) identifies a middle ground lying between the two poles which is the

⁴ 'Corporatist arrangements' mean pressure groups are involved in the making of economic policy and its implementation (Prentice, n.d.).

group which organises to stop a development (road, airport etc.) which is seen as a threat to the general amenity of its surroundings and to future property values. Motivation is likely to be made up of a combination of selfish interest and a wider interest in environmental preservation.

Given that there is such a wide range of groups in terms of interest, size and influence this would suggest a great deal of competition. However, the 'exceptionalism' of the farming lobby and disparity of the environment and conservation lobbies suggests that

"as in economics 'perfect competition' [in the political market] rarely exists except in theory. In practice we have, at best, an oligopolistic situation and at worst a monopolistic situation. In other words groups attempt to manipulate the market in their favour. But they rarely succeed in achieving total control of the market (or policy area) for very long" (Richardson and Jordan, 1979:p13 cited in Grant, 1989:p26).

The rising influence of the environment and conservation lobby in the 1980s suggests the influence of agriculture interests of the political market is threatened and what may come in its place is a form of oligopoly in which a few key groups dominate the policy communities around government departments (MAFF and DoE). Although most groups enjoy reasonable access to the DoE, its participation in environmental matters does not equal MAFF's participation in agriculture. The two policy communities differ in a way which is generally beneficial to farming interests.

"The policy community for rural conservation is characterised as large, diverse and pluralistic; that for agriculture as small, tightly-knit and corporatist" (Cox, Lowe and Winter, 1986:p16).

Outwardly it appears that the farming lobby has had to give some ground to the environmentalists. In practice, however, it has been able to ensure that a particular view of environmental protection based on compensation for property rights has predominated. Despite the importance of the question of interest group effectiveness it is probably the least adequately researched aspect of the study of pressure groups. The principal reason for this is the methodological problems which arise. There are no adequate means of measuring power, influence and effectiveness.

A further important point to note is that,

"The flaw in the pluralist heaven is that the heavenly chorus sings with a strong upper-class accent" (Schattschneider, 1960 cited in Hecló and wildavsky, 1977:p35).

The dominance in policy communities of upper income groups in farming, landowning and environmental and conservation groups, results in an active political elite representing the interests of a wider societal base. Both the 'uncompetitiveness' of the political market and within this, the dominance of certain income groups are explored in this research. It is the purpose of this thesis to offer an illustration of the nature of relationships in the political arena of nature conservation policy-making. A more detailed account of how pressure groups actually influence the political agenda can be found in Grant (1989).

2.2.5 EU as a lobbying force

The influence of the EU on UK policy-making is undoubtedly significant, particularly the impact of the Common Agricultural Policy (CAP) on UK agriculture and nature conservation. However, in order to analyse the competition of interests in the UK nature conservation policy-making process, the influence of the EU can broadly be encapsulated by representing it as a powerful 'lobbying' organisation.⁵

The following discussion focuses not so much on the level of the negative externalities arising from modern agriculture, but on the extent and nature of government intervention to mitigate such externalities.

2.3 Regulation for nature conservation: the Wildlife and Countryside Act 1981

The essence and body of regulation for nature conservation in the UK lies in the Wildlife and Countryside Act (1981). Initially proposed in Parliament to meet an EU Directive on Wild Birds in 1979, the Wildlife and Countryside Act was passed following many debates and amendments. It was initially drafted in consultation with the farming lobby (Evans, 1992) and subsequently the government conservation agency (the NCC), and finally, the conservation interest groups became involved. The following section describes the actual mechanisms of the bill: biological selection;

⁵ The existing and future influence of the EU, not just in policy-making but also enforcement, is an important and interesting area of study and would constitute an ideal follow-up research programme.

management agreements; and nature conservation orders. This is followed by a more detailed discussion of the debate during the passing of the Act and its implementation.

Conservationists campaigned from the 1960s for increased protection of the countryside from modern farming methods, methods which have been induced by the Common Agricultural Policy (CAP) of the European Union (EU). The CAP has encouraged farmers to 'improve' their land at what has been perceived by conservationists, and more recently the general public, as a great cost to the natural heritage of Britain's countryside. Recognition of the damage inflicted, and protection demanded by conservationists, finally came in the form of the Wildlife and Countryside Act, a strengthening of earlier legislation (1947 Town and Countryside Planning Act) which set up the principle of SSSIs but had failed to stop their damage and destruction.

The passing of this bill aroused extensive conflict between farming and conservation interests. Conflict was essentially stimulated by the major difference of the Bill to its predecessor (1947) which was the addition of a requirement of the statutory agency to notify not only the planning authority and the Secretary of State, but also every owner and occupier of land of all sites that they intended to designate. The subsequent designations of SSSIs were seen to threaten landowners freedom to make decisions over their own land and their previous presumptive entitlement as 'stewards of the countryside'.

The most recent piece of environmental legislation was the Environment Protection Act, 1990 which essentially addressed pollution matters. However, there was a section in this Act which made legislative provisions for the re-organisation of the NCC into three individual agencies for England, Scotland and Wales. This reorganisation was criticised for its lack of forethought or consultation with conservation interests and for the hidden agenda which many conservation organisations believed was set to meet landowning interests. Conservationists perceived the reorganisation as a bid to weaken the conservation movement. The reorganisation of the NCC is discussed in more detail in subsequent sections. First, the procedures and costs associated with the NCC and SSSIs are described in sections 2.3.1 - 2.3.3.

2.3.1 Selection of biological reserves

The NCCs main function was to notify planning authorities of any *"area of land [which] is of special interest by reason of any of its flora, fauna, or geological or physiographical features"* (Wildlife and Countryside Act, 1981), to be known as Sites of Special Scientific Interest (SSSIs), in order that they may be aware of the sites natural value when considering planning permission for a development.

The Guidelines for Selection of Biological SSSIs (NCC, 1989b:p71) describe the general principles from which the evaluation and selection procedure has developed.

"The primary objective of nature conservation is to ensure that the national heritage of wild flora and fauna and geological and physiographical features remains as large and diverse as possible, so that society may use and appreciate its value to the fullest extent" (NCC, 1984b:para 15.1). *"Site safeguard, that is the protection and management of the most important areas for wild flora and fauna and their habitat, is regarded as the cornerstone of conservation practice and within this, SSSI notification is now the principal statutory means of achieving this goal"* (NCC 1989b:p7).

"The biological SSSI series is intended to form a national network of areas representing in total those parts of Great Britain in which the features of nature, and especially those of greatest value to wildlife conservation, are most highly concentrated or of highest quality... Each site represents a significant fragment of the much-depleted resource of wild nature now remaining in this country...The ecological interdependence of the SSSIs and the wider environment is crucial and while designation necessitates drawing clear boundaries, it is important to integrate as far as possible the conservation measures for both elements in a total approach...[to ensure the] survival of a necessary minimum"(NCC, 1989b:para 15.2.3).

The NCC suggest that while there is no overall target area,

"the total extent of SSSI land will reflect the consistent application of these principles, selection procedures and standards countrywide" (NCC, 1989b:para 15.2.4).

Presently, about seven per cent of Great Britain is designated as SSSI. The extent of SSSI designated land varies geographically according to the broad regional differences in the extent of natural and semi-natural features. The present range is from 22% in Orkney to 0.2% in West Yorkshire. Furthermore the,

"'Special Interest' in the features of nature is not fixed in time. It is a combination of the intrinsic attributes of nature and the values that people place upon these; and both of these parameters are prone to change in time. Particular examples of habitats may lose value through deterioration, but the type in general may become more important through its increasing rarity. Some species may become more common and less threatened, whilst other decline and assume increased value. The numbers of people interested in a particular feature of nature may also increase or decrease, or their interests show a shift in perspective, so that the kind and weight of public interest are also subject to change" (NCC, 1989b:para 2.6).

In the rationale, selection of sites with *'special scientific interest'* is described as *"a matter of informed best judgements rather than rigid application of objective rules"*(NCC, 1989b:para 2.6).

While the guidelines are based on scientific judgement the above quotes display a degree of flexibility over time and with respect to public values.

A comprehensive list of Potentially Damaging Operations (PDOs) is given to every landowner on notification of a site. This procedure has been amended to include only relevant activities for each site following difficulties arising from such a comprehensive list of PDOs. Should the landowner wish to carry out a listed operation he/she has to inform the statutory agency and if they do not receive a reply from the NCC within four months they may go-ahead with the potentially damaging operation. However, what is more usual is for the NCC to consider the proposal and either give the landowner the go-ahead if the operation is considered benign or initiate negotiation of a management agreement in which the landowner alters his/her proposed development or refrains altogether. The landowner may receive compensation for profits lost as a result of the restricted activity.

Section 15 of the Countryside Act 1968 is the principal means by which management agreements are provided. Although it was available in 1968 only 12 low cost voluntary agreements had been negotiated in Scotland by this means prior to the changed status of SSSIs under the 1981 Act. The principal land use changes proposed have been agricultural (62%), and afforestation or woodland management (28%). The remainder were mainly mineral extraction for agricultural reasons.

If the NCC failed to negotiate a voluntary agreement with a landowner on an SSSI they could appeal to the Secretary of State for a Nature Conservation Order (NCO). A conservation order may be sought only

"for the purpose of securing the survival of particular kinds of plant or animal, complying with an international obligation or of conserving species or features of national importance" (Wildlife and Countryside Act, 1981).

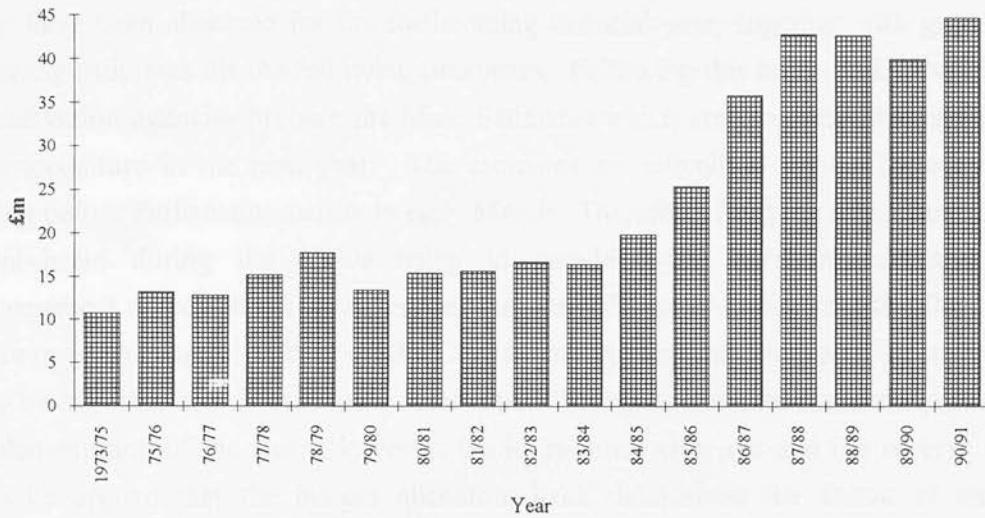
Not all SSSIs are of this standing and therefore the Secretary of State may refuse to make an order which has been the usual result. The NCC's last opportunity to save a reserve is through compulsory purchase. This power has been used only in extreme cases and for the first time in 1990 to save part of the Westhay Moor SSSI in Somerset. In short therefore, protection of SSSIs is generally secured through individual, voluntary management agreements with landowners and occupiers and it is the compensation of such individuals which comprises the single largest element of NCC costs.

2.3.2 The financial commitment

Following the passing of the Wildlife and Countryside Act 1981 and the growing acceptance of the place of nature conservation within government policy-making there has been a real increase in the grant-in-aid commitment by government to the NCC.⁶ This is reflected in Figure 2.3 which illustrates the increase in Grant-in-aid in real terms to the NCC since its inception in 1973 to its concluding financial year, 1990/91.

⁶ Since 1990 the NCC has been known as English Nature, Countryside Council for Wales and Scottish Natural Heritage.

Figure 2.3 Grant-in-aid to the Nature Conservancy Council 1990⁷



As well as selecting and notifying sites considered of special scientific importance the NCC also advised the government and others on matters affecting nature conservation, disseminated knowledge about nature conservation and supported and commissioned research.

Grant-in-aid to the NCC increased by over 200% in real terms since its inception in 1973 and most of this increase has occurred since 1984 when effective demand for management agreements increased. Before describing the system of management agreements, it is necessary first to outline the system of resource allocation to the NCC to illustrate the main determinants of grant-in-aid.

Most NCC income was received as grant-in-aid from the Department of the Environment (DoE) and a small amount of additional income came from bequests and receipts. Each year the agency prepared a corporate plan with details and costings for its preferred programme over the subsequent three years. It was then submitted to the DoE in the following spring, at the beginning of the annual Public Expenditure Survey (PES). The agency's resource requirements were assessed as part of the PES, in which Departments prepare expenditure plans for discussion with the Treasury. The PES culminates in the Chancellor's Autumn Statement, when the government reveals its spending plans for the coming financial year.

⁷Source: NCC Annual Reports 1974 - 1991 Adjusted for inflation to 1990 prices.

It is at this point that the DoE will inform each of its grant aided bodies, how much they have been allocated for the forthcoming financial year, together with guideline planning estimates for the following two years. Following this both the DoE and the conservation agencies prepare the Main Estimates which are the detailed breakdown of expenditure in the next year. The estimates are submitted to the Treasury for laying before Parliament, usually in early March. Therefore, from the rapid increase in grant-in-aid during the 1980s rising in parallel with increasing demand for management agreements it would appear that the NCC grant-in-aid from the DoE was more or less demand-led from the NCC by submitting expenditure plans. From this it may be hypothesised that the main determinants of expenditure are associated with the implementation of the Act. However, the issue is not clear cut and the reverse may also be argued that the budget allocation itself determined the extent of nature conservation designations (Spash and Simpson, 1994). This is a complex question and will be addressed in more detail later in the thesis.

Following reorganisation of the NCC the Secretary of State for the Environment is no longer responsible for grant-in-aid for the whole of the UK but only the new agency in England: English Nature. The Secretaries of State for Wales and Scotland are responsible to their respective country agencies for provision of grant-in-aid. The same Public Expenditure Survey system operates.

To put the NCC grant-in-aid in the wider context of total DoE expenditure, the 1990/91 grant-in-aid to the NCC of £45.8m was taken from the £111m budget for Countryside, Recreation and Environment. This was approximately 3.3% of the total central government expenditure of £1,394m by the DoE in the financial year 1990/91. The largest DoE expenditures are on housing and planning, local government and inner cities. In addition, the DoE funds Her Majesty's Inspectorate of Pollution, the National Rivers Authority, the Building Research Establishment, the Historic Royal Palaces Agency, the Planning Inspectorate, and the Heritage and Royal Estate.

The 1990/91 Countryside, Recreation and Environment budget of £111m included expenditure on the Countryside Commission, National Parks and the Broads, the Nature Conservancy Council, the Rural Development Commission and International Subscriptions, which is aimed to:

"create a framework which will protect and enhance the beauty and diversity of the countryside and conserve its wildlife, while also encouraging the growth of a healthy rural economy" (DoE, 1991:p29).

The following Table (Table 2.1) illustrates the breakdown of the NCCs expenditure over the three year period 1988 to 1991. Site safeguarding amounted to approximately one half of the annual expenditure and only eight per cent was spent on the wider environment.

Table 2.1 Nature Conservancy Council expenditure by function ⁸

<u>Area of expenditure</u>	<u>Expenditure (£m)</u>		
	1988-89	1989-90	1990-91
Site safeguarding	22.1 (55%)	22.9 (56%)	23.0 (50%)
Conservation in the wider environment	2.9 (7%)	2.6 (6%)	3.7 (8%)
Science base	8.8 (22%)	9.1 (22%)	10.1 (22%)
Publicity and Education	2.4 (6%)	2.3 (6%)	2.3 (5%)
Development and Project Grants	1.4 (3%)	0.9 (2%)	1.9 (4%)
Other	2.8 (7%)	3.3 (8%)	3.8 (8%)
Reorganisation	-	-	1.0 (3%)
Total	40.4	41.1	45.8

⁸Source: DoE Annual Report 1991: p35

2.3.3 Area designated

The areas designated by the NCC as National Nature Reserves (NNRs) and Sites of Special Scientific Interest (SSSIs) have risen steadily over the period 1975 - 1991 and 1981 - 1991 respectively. This is shown in Figures 2.4 and 2.5.

Figure 2.4 Increase in the number of nature reserves 1975 - 1991⁹



Figure 2.5 Increase in the number of SSSIs 1981 - 1991¹⁰



⁹ Source: NCC Annual Reports 1975 - 1991

¹⁰ Source: NCC Annual Reports 1981 - 1991

Table 2.2 Distribution of the area of SSSI designation in Scotland¹¹

Local Authority Region	Percentage of Region
Borders	5%
Central	7%
Dumfries and Galloway	10%
Fife	5%
Grampian	6%
Highland	16%
Lothian	4%
Orkney	22%
Shetland	11%
Strathclyde	6%
Tayside	7%
Western Isles	11%
Scotland Total	10%

There are currently 1,350 SSSIs in Scotland (10% of the land area) and about 5,000 in Britain (6% of the land area, i.e. 1,721,502 Ha). In Scotland, the designated area involves 8,365 owners and occupiers, over 816,596 Ha. Table 2.2 shows that there is not a uniform geographical distribution of nature conservation interest. The proportion of land designated SSSI varies from 4 per cent in Lothian, to 22 per cent in Orkney. The high concentration of designations in some areas has lead to confrontations between the local landowning and farming community and the NCC.

The approach to nature conservation up to the Wildlife and Countryside Act 1981 had been essentially negative and defensive, aiming to stop intrusive development, with little positive management or forms of development considered appropriate. This approach to conservation did not essentially change after 1981. Although the 1981 legislation on SSSIs gave the NCC widely extended powers, the basic philosophy remained that the future of the countryside

"lies in the natural feel for it possessed by those who live and work in it" (Wildlife and Countryside Act, 1981).

¹¹ Source: S Ward, pers comm, SNH, 1992

2.4 Debate over the Wildlife and Countryside Act 1981

The points of contention at the macro political level during the debate of the Bill illustrate not only the resistance of the agriculture lobby to regulation of their members activities but also the divergence of interests over land use and conservation and hence the essential differences between agriculture and conservation interests.

The real debate began when the conservation lobby sought increased protection via notification of Potentially Damaging Operations (PDOs). The conservation lobby pushed for the statutory requirement for prior notice to be submitted by landowners and occupiers of all deleterious change for **all** SSSIs designated and not just those particularly special sites agreed to by ministers. It was felt by the NCC that prior notification of all sites would threaten existing goodwill among landowners and occupiers and would also result in an unacceptable burden on NCC staff. The agricultural and landowning lobbies reacted to prior notification by tabling amendments which required NCC not only to renotify all SSSIs but also to pay compensation where farming activities were consequently restricted. Parliament accepted these amendments which radically changed the role of the NCC.

2.5 Implementation of the Wildlife and Countryside Act 1981

2.5.1 Local confrontations

This system of serving formal notice with a long list of damaging operations which varied in degrees of relevance, was perceived as confrontational and led to widespread and prolonged criticism of the NCC for its implementation of the Act. The impersonal nature of the actual letters sent to farmers also caused offence. Critics have suggested the NCC ought to have consulted each owner or occupier first to discuss their proposals and as a result draw up a shortlist of likely potential damaging operations before serving formal notice. If Scotland had been legislated for separately it would have had a very different Wildlife Act because agriculture is the predominant land use and activity, with a higher and more extensive nature conservation value (J Morton Boyd, ex-NCC, pers comm, June 1993). As a result of agriculture's predominance almost every agricultural practice could be considered 'damaging'. MacKay (ex-SOAFD, pers comm, 1993) draws on two other issues which exacerbated agricultural-conservation conflict. The first of these was the term 'consent', used when the NCC were allowing a landowner or occupier to proceed with

an activity, which conveyed a sense of superiority.

The second was the '*necessary cultural rapport*' which many NCC officers lacked when dealing with the highland and island communities

Orkney, an area already noted in Table 2.2 for its extensive system of SSSIs, had particularly damaging confrontations between the local farming populations and the NCC, which reached their peak in 1984. Feelings rose so high that at one point two effigies of the leading NCC figures responsible for notifications in Orkney were mounted in public places. One particular case of commercial peat extraction attracted substantial controversy and ill-feeling. The general essence of the discord was the threat felt by local island farmers to their freedom in making choices over their land use activities by what appeared to be an unaccountable body with little, if any, local knowledge.

The focus of the NCC in the latter half of the 1980s was the afforestation of the Flow Country in Caithness and Sutherland which was described by the NCC, as the "*most important nature conservation issue in the last 30 years*" (NCC, 1987).

These confrontations attracted a great deal of media coverage and publicly undermined SSSIs as a system of conservation in Scotland. Decisions for nature conservation in Scotland were still being made by the chief NCC scientists at the NCC headquarters, Peterborough, England. Widespread sentiment was that as a result of the political and geographical distance of the chief scientists from the focal points of contention, conflicts in Scotland were not being dealt with in a sensitive manner.

The final public SSSI controversy before the re-organisation of the NCC was that of John Cameron on the Glen Lochay Estate in Strathclyde. Cameron submitted an application for a forestry grant with respect to 640 hectares of which only a part was SSSI. The application was widely opposed on scenic and nature conservation grounds. The Forestry Commission refused the grant for nature conservation reasons and thus the NCC were essentially liable for the loss of profits over the whole proposed development. The NCC argued that they were only responsible for the SSSI section and conflict intensified between John Cameron and the NCC. The Land Tribunal awarded Mr Cameron £500,000 in compensation, which following interest and expenses meant a payment by the NCC of approximately £1m. The main issue to arise from this case was the fear that public funds were being used to compensate landowners as a result of pre-emptive action. In other words, claims for

compensation for lost grant payable were being made by the agriculture and forestry sectors when there may have been no intention to carry out the operations at all. This loophole was closed in 1989 following a ministerial decision that the forestry grant element would be excluded from the calculation of compensation in management agreements. However, compensation for lost agriculture subsidy continues.

"The British people, through their government, were subsidising conservation for the first time in its history. The real problem was not the fact that conservation had to pay its way but that the official government body was so severely limited in what it could do by lack of funds. By far the lions share of any compensation payments would go to the farming and forestry communities. Yet, while the Ministry of Agriculture Improvement Grant in 1978 ran to £540m, the total budget from which the NCC had to fund all its work was £7m" (Evans, 1992:p189).

Furthermore, despite the mandatory system of PDO notification and compensation damage to SSSIs has continued. Of the 1,721,502 hectares of SSSI in Great Britain, 1.63 per cent (28,011Ha covering 48 sites) has suffered damage from agricultural activities and 2.1 per cent (36,164Ha covering 149 sites) from other activities.^{12 13 14}

In Scotland agricultural damage in 1992 was approximately 14 per cent of the total damage in Scotland. The 1992 figure covers 21 SSSIs over 2,852 hectares from a total of 816,596.¹⁵

Local conflict, the high cost and continuing damage led to two attempts for reform. The first was an all-party House of Commons Environment Committee which reported recommendations for the amendment of the 1981 Act in June 1985. Nine of the total eighteen recommendations related to agriculture.

They proposed that,

"conservation be given comparable status with food production and that the Ministry of Agriculture should act accordingly when awarding grants" (Evans, 1992:p189).

¹² Source: NCC (1991)

¹³ 'Other activities' included: forestry, activities given planning permission, activities of statutory undertakers and other public bodies not included in the above categories, recreational activities, insufficient management and miscellaneous (including pollution, unauthorised tipping and burning).

¹⁴ 1989/90 was the only financial year in which a site was lost which means that the damage caused results in the loss of the special interest and the site will be denotified. Figures include 'long term damage' which means lasting damage to the special interest, 'short term damage' in which the special interest could recover and 'partial damage' in which the damage will result in the denotification of part of an SSSI.

¹⁵ Figures include sites notified under the 1949 National Parks and Access to the Countryside Act and not yet renotified. Source: S Ward, pers comm, SNH, 1992

The second proposed reform was a Private Members Bill later that year which sought to strengthen the legislation. However, it met strong opposition from landowning interests and the amendment finally enacted in August 1985 did little but give the NCC an extra month (from 3 months to 4) to respond to PDO intentions. The Act also closed the three month loophole between the NCC informing the landowner of the intention to designate and actually designating. During this period the site had been afforded no legal protection but following reform the site was protected from the outset.

2.5.2 Management agreements

Figure 2.6 Number of management agreements¹⁶

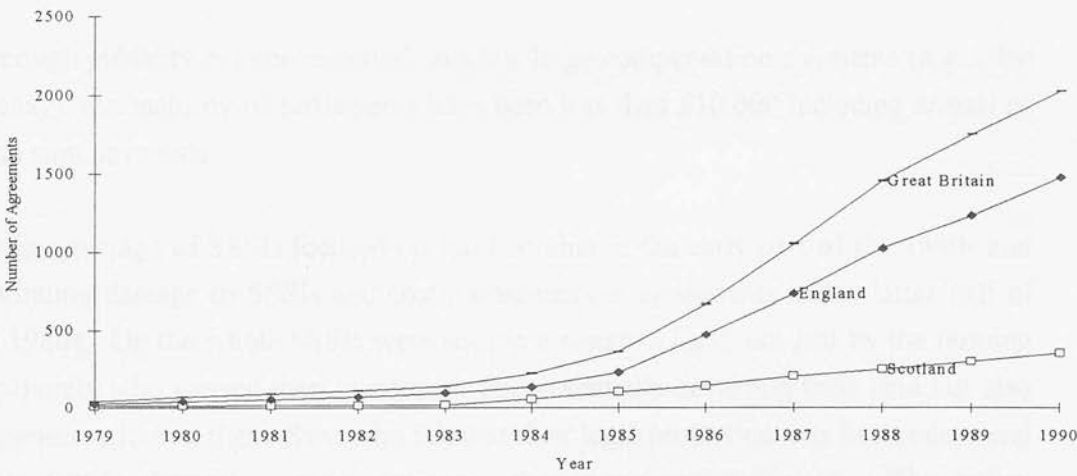
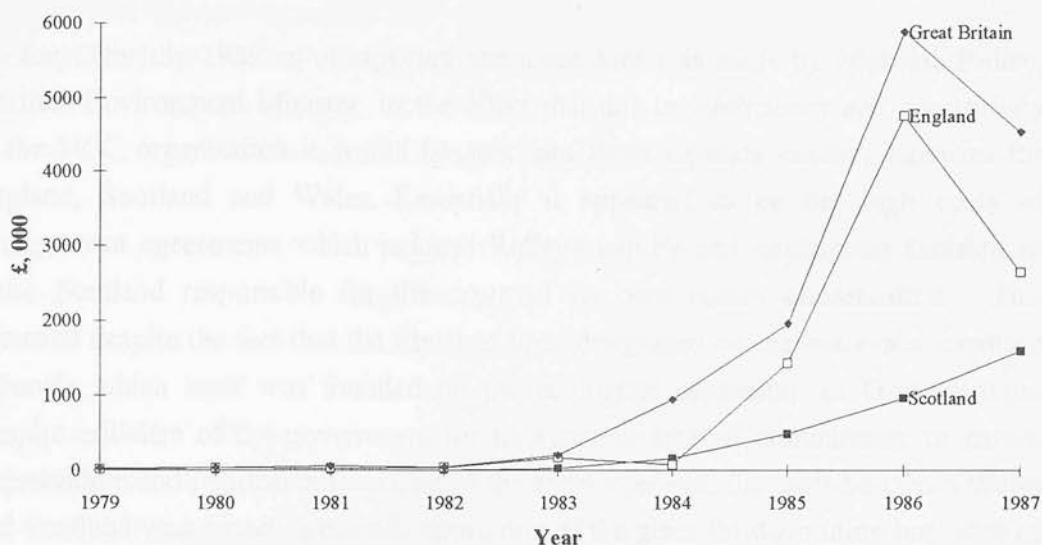


Figure 2.6 illustrates the increase in the number of management agreements during the period 1979 to 1990. The demand for management agreements became evident in 1984 and has continued to increase at a slower rate. The area under agreement in Scotland increased from less than 5,000 Hectares in 1979 to over 40,000 Hectares in 1990. The main reasons behind proposals for changes in land use were found to be agriculture and forestry policy, internal changes within the farm or holding and the influence of the Wildlife and Countryside Act (Livingstone, Rowan-Robinson and Cunningham, 1990). Figure 2.7 below shows the substantial increase in cost of management agreements towards the latter half of the 1980s.

¹⁶ Source: NCC Annual Reports 1979-1990

Figure 2.7 Cost of management agreements 1979 - 1991¹⁷



Although publicity has concentrated on a few large compensation payments (e.g. Glen Lochay), the majority of settlements have been less than £10,000 including annual or lump sum payments.

Media coverage of SSSIs focused on local conflict in the early part of the 1980s and continuing damage to SSSIs and costly management agreements in the latter half of the 1980s. On the whole SSSIs were seen in a negative light, not just by the farming community who viewed them as intrusive and potentially devaluing their land but also by conservationists themselves who felt that their legal protection was bottomless and while SSSIs themselves were necessary they were not sufficient. The policy mechanisms failed to address the conservation issues of the wider countryside. The farming lobby openly felt the system to be regulatory and legalistic while conservationists generally saw the system as dependent upon voluntary management agreements too weak and lacking in legal fibre.

¹⁷ Source: NCC Annual Reports figures adjusted for inflation to 1990 prices

2.6 Reorganisation of the NCC: 1990

On the 11th July 1989 an unexpected announcement was made by Nicholas Ridley, the then Environment Minister, to the effect that due to inefficiency and insensitivity in the NCC organisation it would be split into three separate country agencies for England, Scotland and Wales. Essentially it appeared to be the high costs of management agreements which induced Ridley's inquiry and subsequent decision to make Scotland responsible for the costs of its own nature conservation. This occurred despite the fact that the sites had been designated on the basis of a scientific rationale which itself was founded on the ecological continuum of Great Britain. Despite criticism of the government for its apparent lack of commitment to nature conservation and political mishandling of the announcement, the reception from Wales and Scotland was mixed - generally approving of the plans for devolution but wary of the governments reasons.

Criticisms were centred on the organisational fragmentation of nature conservation and the resulting implications this could have for the agencies supporting a satisfactory science base. In addition the ability to be able to maintain the ecological continuum and to follow consistent standards with respect to British and international conservation issues came under question.

There were calls for the establishment of a co-ordinating body for the three agencies to co-ordinate the science base and international matters. The proposed body, the Joint Nature Conservation Committee (JNCC) was subsequently established and is funded by the three individual agencies for England, Scotland and Wales.

Following Royal Assent of the Environment Protection Bill in 1990, the Natural Heritage (Scotland) Bill was introduced which amalgamated the new Scottish NCC with the Countryside Commission for Scotland in order to make a new agency which would take account of a wider range of conservation interests. The new agency, Scottish Natural Heritage (SNH) has a significantly broader remit in contrast to the narrow scientific remit of the NCC. This includes nature conservation and enjoyment of Scotland's natural heritage. Devolution of decisions was taken not only to the Scottish level but also to four regions within Scotland; South West, South East, North West and North East. The legislative provisions which SNH gained for management agreements were much broader than those which were available to the NCC. Under the NCC, management agreements had been restricted to land designated SSSI or

land adjacent to an SSSI but following the reorganisation SNH could enter management agreements on any land. This meant that SNH, as the awarding agency, had significantly increased flexibility (SOEnD, 1993, Annex One: Schedule 10).

2.6.1 Debate over the Natural Heritage (Scotland) Act 1991

The initial provisions of the Act were the subject of a number of proposed amendments which were strongly influenced by a sub-committee chaired by Field Marshal Lord Carver, of the House of Lords Select Committee on Science and Technology.

In January 1991 the main and most controversial amendment, described by Simon Pepper (WWF) as a "*parliamentary botch-up*" (Focal Point, BBC1) was introduced during the Lord's passage of the Bill by Lord Pearson of Rannoch. This amendment would have required a statutory review by SNH of all 1,350 Scottish SSSIs and the introduction of a mechanism to enable a non-scientific appeal against SSSI notification. Its aim, according to Lady Saltoun of Abernethy, was to take account of local community's interests in decisions. Robert MacLennan of the Liberal Democrats, in support, highlighted the problem of large tracts of Northern Scotland being designated as SSSI stopping development without regard for the social and economic consequences.

The debate led to Brian Wilson, Labour's rural affairs spokesman describing the Lords as a

"self-interested gaggle of Scottish landowners" ('Sites of Special Parliamentary Interest', *Scotsman*, 1991).

Counter to the perceived landowning interests, representatives of the NCC declared that the system of review and appeals would be "*catastrophic*" and would set SNH back 5 years. The RSPB pointed out that since 95 per cent of SSSIs underwent a full review following the 1981 Wildlife and Countryside Act with boundaries being checked and some altered, that a further review would turn the clock back 10 years and waste millions of pounds of taxpayers' money. Albery Manning, Chairman of Scottish Wildlife Trust (SWT), criticised the process of appeal suggested by Pearson as, "*top heavy, wasteful and costly*" in a discussion with David Wright (Radio 4, 1991, 20th February).

Alternative appeals procedures were proposed, such as that by Lady Saltoun and the National Farmers Union who called for an appeals procedure against any new designations. Patrick Gordon Duff Pennington, ex-convenor of the Scottish Landowners Federation, suggested making the 5 per cent of sites still waiting for notification from the 1981 Act, subject to some kind of appeal.

The controversial decision to set up an appeals procedure when designating new SSSIs was backed by the Lords with a majority of 152 votes to 6 on the 6th June 1991 despite fierce opposition from the conservation lobby and opposition MPs. The Scottish Office minister, Lord Strathclyde, in a bid to achieve a compromise between peers and the environment lobby, convinced peers of the benefits of the clause to set up an independent advisory committee appointed by the Scottish Secretary, Ian Lang. Its purpose was to review the scientific importance of new sites only in the last resort and not to "second guess SNH" (Lang, Focal Point, BBC1 21 November 1991). Lord Strathclyde claimed the government's intention was to build bridges between the conservationists and land users. Brian Wilson attacked the government's amendment, saying that it was,

"a complete capitulation to the landowning lobby, and a body blow for environmental interests in Scotland" ('Sites of Special Parliamentary Interest' *Scotsman*, 1991).

During the immediate years following reorganisation the farming and landowning community have accepted the new conservation agency with several of their members taking seats on SNH's four regional boards. Furthermore, the appeals committee has yet to meet over an appeal. Anecdotal evidence from the conservation groups reflects a degree of scepticism as to the potential success in terms of nature conservation of an organisation whose remit is relatively wide and whose regional boards are of mixed interest.

2.7 Discussion

The discussion above highlights the complexity of integrating nature conservation objectives into agriculture activities and leads to the core question of this thesis: that of government allocation of financial resources to nature conservation. The limited budget of the NCC means site selection is determined by budget allocation as opposed to a superior system of conservation worth defined in terms of rarity and diversity.¹⁸

Spash and Simpson (1994) describe the present system of nature conservation in terms of a Utilitarian model which means that the conservation agency considers both the designation of sites and the extension of existing sites within the parameters of its existing budget. The size of 'rent' (compensation) that can be extracted by the landowners from the agency is dependent upon the outcome of the bargaining process (in determining a management agreement), which in turn depends on the agency's budget, the price at which the land is offered to the agency, and the informational asymmetries between the landowner and the agency. This is an *'implicit utilitarian ethic'* (Spash and Simpson, 1994) on site preservation and contradicts the fact that certain sites of a high conservation value should be preserved irrespective of the cost. Precisely because the agency is budget constrained there is a clash of ethics and practice.

As shown in Table 2.1 management agreements comprised the greatest proportion of grant-in-aid to the NCC. This is the compensation (or 'rent') paid to landowners and occupiers for lost income as a result of the designation. Why compensation is paid to agricultural landowners and occupiers and not any other type of industry subject to economic regulation is in part explained by the fact that agriculture produces a public good,

"which society should recognise by providing the financial resources to permit it to fulfil its task" (Commission of the European Communities, 1985:(COM (85) 333 EC Commission, Brussels, cited in Hodge, 1989).

This statement reflects the 'exceptional' attitude the EU has toward agriculture. The case of compensation may be further explained by the common distinction made between pollution (particularly the introduction of chemicals and waste products into the environment) which is regarded as an **external cost** (a public 'bad') and the loss of

¹⁸ As encompassed in the 1977 Nature Conservation Review and subsequently bound by law (1981).

conservation and amenity values in rural areas which is regarded as the **failure to produce an external benefit** (a public 'good') (Hodge, 1989). Conventional economic analysis of efficiency indicates that the producers who are prevented from causing an external cost should not be compensated, but that those whose actions are constrained so as to provide an external benefit should receive compensation. Therefore, if nature is regarded as an external benefit (a public 'good'), the government may restrict the farmer's actions so as to ensure its provision. This then imposes a cost on the farmer in the form of lost opportunities for land development, and it is therefore appropriate to pay compensation.

Hodge takes his analysis a step further in discussing the 'right' that is implicitly allocated to agriculture within this system.

"The payment of compensation implicitly rests the rights to alter the environment in favour of the farmer...In having this option [of land improvement or landscape destruction] curtailed by government intervention, the farmer is having something taken away. Non-payment of compensation on the other hand would imply that the farmer does not have such a right, so that when a change is made to the countryside he or she is breaking the law, in the same way as if pesticide was being dumped into a water course " (Hodge, 1989:p1028).

A reference point exists which defines the level of responsibility which farmers are expected to take towards the rural environment. The position of the reference point reflects the existing status quo between conservation and environmental interests and agriculture interests in society, or alternatively, the existing distribution of property rights, and therefore a change in the reference point reflects a change in the ethical perspective of what farmers should or should not be expected to do as a moral responsibility.

Because of CAP subsidies to farmers the compensation paid to farmers reflects the financial opportunity cost rather than the social opportunity cost. The net opportunity cost to society as a whole for designating Sites of Special Scientific Interest may not be equal to the social opportunity cost. This is because the reduction in agricultural production will create some saving in the agriculture department but if there is not an intra-governmental transfer this will not be the relevant cost to the nature conservation agency. This money 'illusion' may influence political decisions in relation to the level of conservation provided. If the compensation paid is greater than the

social cost¹⁹, but not the financial opportunity cost this might create political pressures for a less than socially optimal level of conservation, that is, a reduction in conservation agency budget.

"The issue is concerned with the public perception of the location of the reference point...There are likely to be pressures on the reference point towards expecting a higher level of environmental management from farmers. These pressures will be supported by the growing concern for the environment and the declining emphasis on food production in agricultural policy" (Hodge, 1989:p1034).

In the introduction the rise of the conservation and agriculture interests and their participation in the political community whose 'vortex' is the Treasury were discussed. The 'reference point' as described by Hodge has been and continues to be an integral parameter in determining the ground rules for nature conservation policy-making and relevant budget allocation. It is this reference point which the conservation groups seek to change through lobbying decision-makers, campaigning to the public and engaging in competition with the agricultural lobby. The agriculture lobby itself seeks to maintain the status quo 'reference point' or distribution of property rights.

Therefore, the supply of nature conservation does not appear to be determined on economic grounds but is more the result of a political process emerging from some kind of bargaining within a political community. At the heart of the debate on conservation and environmental policy lies two of the most fundamental and recurring dilemmas faced by policy makers. The first is the struggle between those who want to exploit natural resources for short run economic gain and those who want to use the resources sustainably to maintain long run productivity. This struggle, particularly in agriculture, is determined by the enduring political influence the landowning and agriculture lobbies have maintained. The second is the priority that economic interests have over conservation and environmental interests in the policy consultation process.

The evolution of regulation over time to meet public demands reflects a reactive approach by the UK government to the externalities arising from contemporary economic activities, in particular agricultural activities. The reactive approach of government to environmental policy-making implies that they are allowing the national interest to be determined by a conflict of interest between key interest groups.

¹⁹ Willis, Benson and Saunders, 1988

SSSIs have provided the entry point to the understanding of the political conflicts from which 'policy' emerges and therefore are seen to be a central example to the whole issue of what determines government expenditure on nature conservation.

There are four main propositions:

- (i) the rise of the conservation and environmental lobbies have led to the gradual and incremental development of economic policies for conservation of nature;
- (ii) the competition between agriculture and conservation interest groups determines policy;
- (iii) the costs of policy provide an overriding constraint to the influence of interest groups; and
- (iv) entrenched property rights establish a bias to private property ownership and therefore agriculture interests.

The above four propositions are addressed within a theoretical framework in Chapter Three.

3

Economic Theory of Environmental Regulation

3.1 Introduction

Generations of economists have attempted to address the question of changes in government expenditure and as a result, an economic theory has evolved, particularly in the latter half of the 20th century. There are two main strands to the development of economic theory of government expenditure: (i) Public Choice Theory and (ii) Public Interest theory. At the broadest level Public Choice theory is defined as, "*the economic study of non market decision-making, or simply the application of economics to political science*" (Meuller, 1989 cited in Caparaso and Levine, 1992). The theory is the same as that of political science but the methodology of public choice is that of economics. Public Interest Theory relates back to early political scientists and Marx's view that big business controls institutions. Current literature on the theory of government expenditure derives in part from the literature on public finance during the 1950s and in part from the seminal contributions of Kenneth Arrow's *Social Choice and Individual Values* (1951) and Anthony Downs *An Economic Theory of Democracy* (1957). These analytical foundations were built upon by several eminent economists during the 1970s and 1980s, culminating in Beckers model of Competition Among Pressure Groups in 1983. Beckers model is essentially neo-classical, describing public policy as the outcome of competition between interest groups to either maximise members pay-offs (that is, to maximise subsidies to members or minimise members taxes). The purpose of this chapter, is to understand the relevance, and the limitations, of this approach to the field of environmental regulation, with specific emphasis on regulation of agricultural activities for nature conservation.

3.2 Environmental externalities, regulation and economic theory

Since the 1960s, rising public concern for the environment has led to increased awareness of the externalities arising from economic activities such as agriculture, forestry, housing development etc., and as a result, economic regulation for nature conservation and protection of the rural environment has been developed. Existing regulation is in the form of public policies such as Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR) and Environmentally Sensitive Area (ESA) designation, which seek voluntary management agreements with landowners, and/or employ monitoring and fines.

According to Baumol and Oates (1988) externalities must have two principal conditions to be present. Firstly that an individual's utility, say A's, must be affected by another's activities (say B, who may be an individual, a corporation or a government) without particular attention to the effects on A's welfare. And secondly, the decision-maker, whose activity affects A's utility levels, does not pay (receive in compensation) for this activity an amount equal in value to the resulting benefits (or costs) to others. In short therefore, certain agriculture and forestry activities negatively affect the welfare of some individuals and that loss in welfare goes uncompensated.

The costs and benefits to society of externalities which affect the natural environment are comparatively unknown, although environmental economists have attempted to develop valuation techniques (contingent valuation, hedonic pricing, etc.) to measure these. It is only possible to acquire a good appreciation of the costs of environmental degradation if the value of the environment to society is known, that is the total economic value made up of use and non-use values. Since adequate valuation techniques have eluded economists to date a generally acceptable economic framework for decision-making for nature conservation has yet to be established. Pearce (1989) suggests that an improvement in environmental quality is also an economic improvement if it increases social welfare. This however, raises questions about whose welfare is involved and to what extent should future generations be considered?

Pearces' (1989) economic approach to valuation of the environment does offend some economists such as Jacobs (1991) and Daly and Cobb (1990) and it must be conceded that measuring the gains and losses using money as a measuring rod is technically difficult and ethically contentious (Lowe, Clark and Cox, 1993).¹

The rising quantity and quality of information via the media has increased pressure on the government to address the issues. The government must now allocate an environmental budget without an adequate ex-ante assessment. That is, to determine the 'optimal' level of nature conservation to maximise societal welfare requires measurement of a number of variables, including the 'value' of nature conservation to society, which are not readily quantifiable. In addition to this the time span in which decision makers must operate, and the breadth of society that should be considered (e.g. local, national, global etc.) are also parameters within which decisions must be considered. The optimum level of nature conservation however, is an elusive goal, if it exists at all.

This study aims to address the question of why the UK government chose to spend £45.1 million in 1990/91 of public funds on nature conservation and why this allocation has increased over time? That is, what forces determine and/or bring about a change in the governments allocation of resources.

3.3 Economic Theory

Several theories have been advanced to explain the pattern of government intervention and economic regulation of the market. Within this context economic regulation should be viewed in its widest perspective as

"taxes and subsidies of all sorts as well as explicit legislative and administrative controls over rates, entry and other facets of economic activity" Posner (1974).

The economic theory of regulation was formally presented by Stigler (1971). The principal focus was the integration of political behaviour analysis with the larger body of economic analysis. Stigler recognised that interest groups influenced the regulatory process by providing financial and/or information support to government agents. Following the work two main theories of economic regulation have been

¹ For a more full discussion of non-market valuation techniques see Lipsey (1983) and Pearce (1989).

proposed. The first of these theories, the Public Interest Theory, initially received the support of economists and subsequently lawyers. This theory suggests that regulation is supplied in response to the demand of the public for the correction of inefficient or inequitable market practices. The second theory, the Capture Theory, espoused by what Posner (1974) describes as an, "*odd mixture of welfare state liberals, muckrakers, Marxists and free-market economists*" states that regulation is supplied in response to the demands of interest groups competing amongst themselves to maximise the 'income' of their members.

Capture theorists have important differences in their thinking and Posner suggests the economists' version is the most promising.

The Public Interest Theory of Regulation relies upon two main assumptions. Firstly, that economic markets are fragile and apt to operate inefficiently or inequitably if left alone; and, secondly, that government regulation is virtually costless. Thus, for example, farm subsidies, the minimum wage, trade union protection etc. are simply responses of government to public demands for the rectification of remediable inefficiencies and inequities in the free market; and, behind every intervention is a market imperfection, the existence of which gives a complete justification for some regulation (which is assumed to operate efficiently and without cost).

Theoretical revision has been both stimulated and substantiated by a growing number of case studies demonstrating that many contemporary public policies cannot be explained on the grounds that they increase wealth or equity in society and also that they are not cost-free. A further problem with the Public Interest Theory is it does not provide any mechanism or linkage by which a perception of public interest is translated into legislative action.

Capture theory perceives that regulation comes from institutions and therefore capitalists control economic regulation. However, on closer examination it is found a great deal of regulation is beneficial to small business or non-business groups such as dairy farmers and unionised labour and therefore these forms of regulation remain unexplained in capture theory.

The formulations of capture theory by political scientists derive from the work of Bentley and Truman (1908, cited in Becker 1983) in which they emphasised the importance of interest groups in the formation of public policy. This is adopted by pluralists who believe that interest group organisation is the natural expression of collectively held interests. Posner (1974) criticises this approach for its lack of theory or explanation of why some interests are effectively represented in the political process and others not, or the conditions under which interest groups succeed or fail in obtaining favourable legislation.

Stigler (1971) discards the assumption of '*pristine* (that is, untainted) *legislative purpose*' and admits the possibility of institutions being '*captured*' by interest groups in addition to regulated firms. He also replaces the militaristic flavour of '*capture*' with the "*more neutral terminology*" (Peltzman, 1989) of supply and demand. Thus, Stigler (1971) agrees with political scientists that economic regulation serves the private interests of politically effective groups although his economic theory is more precise and open to testing than political theory.² Stigler's theory is also commensurate with the strong assumption of neo-classical theory that people are self-interested rational beings.

Becker (1983) develops a link between Capture Theory and Public Interest Theory in which economic efficiency is emphasised. Becker (1983) describes how groups organise to exert pressure on the political process in order for them to be granted benefits or made exempt from paying for others benefits. The equilibrium represents a balancing of marginal pressure exerted by winners and losers. Becker's central argument is that under these conditions, dead-weight costs are a constraint on the efficiency of regulatory policies. Deadweight costs are defined as

"a loss in social welfare deriving from a policy or action that has no corresponding gain. Deadweight losses represent economic inefficiency and result when there is some flaw in the price-setting mechanism" (Bannock et al, 1992).

The gains and losses for producers and consumers provide the motivating forces behind the competing pressures on the political process. It is this competition, Becker argues, that results in the political process being drawn toward a more efficiency-enhancing regulation. That is, neither winners nor losers would oppose (rationally) a change that eliminated some dead-weight loss. This is important for two reasons.

²Posner points out the weakness rather than the strength in a theory that can fit any body of data.

Firstly, payers and payees of taxes and subsidies will incur costs to generate pressure and to alter their behaviour so as to maximise the benefits (subsidies) or minimise the costs (taxes) meted out by the political process. In theory, both winners and losers would press for change if regulatory redistribution isn't the cheapest. Secondly, market failure creates incentives for regulation. If regulation reduces inefficiency then wealth will rise. The extra wealth will induce greater pressure for regulation from winners and may attenuate the opposition of losers.

Posners (1974) observation that,

"the general assumption of economics, that human behaviour can be understood as the response of rational self-interested beings to their environment, must have extensive application to the political process"

provides the basis for Becker's (1983) model of 'Competition Among Pressure Groups for Political Influence'. In commenting on Beckers model, Peltzman emphasised its important role in developing the link between the theories of 'Public Interest Theory (Efficiency Theory)' and 'Capture Theory'. Given the importance of this link, the role of interest groups in the environmental movement and the unchallenged strength of landowning and agriculture interests, Beckers model would appear to offer a valuable insight into the development of a theory of environmental policy-making.

3.4 A Theory of Competition Among Pressure Groups for Political Influence.

3.4.1 Introduction to the theory

Becker (1983) proposes that private interest groups, whose members are either producers or consumers, compete in the political market to alter the outcome of policy to meet their own ends (interests). Groups are assumed to use political influence to enhance the well-being of their members. *Homo economicus* is the central driving force of competition and seeks to maximise members utility (usually measured in terms of individuals income) by eliminating inefficiencies (dead-weight costs) in the distribution of taxes and subsidies associated with economic regulation. Becker (1983) models groups influence functions, their pressure production functions and group competition through a series of differential equations. A groups influence is a function of pressure generated by itself, pressure generated by other groups and other variables which he includes in the analysis as 'x', a 'catch-all' variable. Influence

can be expanded by expenditure of time and money on campaigns, contributions, political advertising and other ways that exert political pressure.

Becker (1983) quotes Bentley (1908) as someone who even as early as 1908 identified the role of pressure groups in policy-making.

"Pressure ...is always a group phenomenon. It indicates the push and resistance between groups. The balance of this group pressure is the existing state of society."

Becker (1983) goes on to illustrate that the competition among pressure groups for political influence determines the 'socially optimal' equilibrium structure of taxes and subsidies and other political favours. Following competition, a political equilibrium results which has the property that all groups maximise their incomes by spending their optimum amount on political pressure, given the productivity of other groups. For analytical convenience Becker assumes each group acts as if expenditure by other groups is unaffected by changes in its own expenditure.

Stimulated by the atmosphere created by Stigler (1971), Posner (1974) and Peltzman (1976), Beckers (1983) principal aim of modelling political competition among pressure groups was to

"unify the view that governments correct market failures with the view that they favour the politically powerful" (Becker, 1983:p371).

3.4.2 A Theory of Competition Among Pressure Groups for Political Influence.

The basic assumption of the analysis is that taxes, subsidies and other political instruments are used to raise the welfare of the more influential pressure groups. Groups compete within the context of rules that translate expenditures on political pressure into political influence and access to political resources.

The theory begins with the greatly simplifying assumption that there are only two homogeneous groups in society s and t . (This is relaxed later as the model becomes more detailed.) Since identical members of the groups must have the same incomes (utility),³ Z°_t and Z°_s can measure the full income of each member of s and t prior to government redistribution, and Z_s and Z_t can measure their incomes (utilities) after redistribution, so that

$$R_s = Z_s - Z^\circ_s \text{ and } R_t = Z^\circ_t - Z_t \quad (1)$$

are the redistributions to each s and away from each t .

All political activities that raise the income of a group will be considered a subsidy to that group, and all activities that lower incomes will be considered a tax. The amount raised by all taxes on t can be written as,

$$S = n_t F(R_t), \quad (2)$$

where n_t is the number of members of t , and R_t is the taxes paid by each member. The function F is the revenue from a tax of R_t and incorporates the dead-weight costs that result from the distorting effects of taxes on hours worked, investments, and other taxpayer choices or the collection costs of the tax. Since these costs tend to increase as the rate of taxation increases

$$F(R_t) \leq R_t, F' \leq 1, F'' \leq 0^4 \quad (3)$$

The subsidy to each member of s is determined from

$$n_s G(R_s) = S = n_t F(R_t), \quad (4)$$

where n_s is the number of members and R_s is the subsidy to each member. G is the cost of providing R_s and incorporates the dead-weight costs from the distorting effects on hours worked, investments, and other choices by recipients.

³Assumption: the utility of each person is measured by his real full income and full incomes can be aggregated to measure aggregate income or aggregate output.

⁴ $F(R_t) = R_t, F' = 1, F'' = 0$ when taxes do not distort behavior, i.e. when 'lump sum' taxes are used.

The properties of G are

$$G(R_s) \geq R_s, G' \geq 1, G'' \geq 0. \quad (5)$$

Equation (4) gives the budget equation between the amount paid in taxes and the amount received as subsidies, a relation that has a major effect on the competition for political influence. It is important to note that the budget equation does not state that subsidies ($n_s R_s$) equal taxes ($n_t R_t$) because dead-weight costs reduce subsidies below taxes.

Becker (1983) does not address the issue of how the influence of interest groups translates in different political systems although he does recognise that all systems, including dictatorial and democratic, are subject to pressures from special interest groups.

Becker deals with the end product of this translation called 'influence functions' and suggests the weak restrictions placed on these functions will enable application to many different systems. In this thesis, influence functions are assumed to be system determined (that is, endogenously determined within the existing system) and therefore no attempt will be made to extend analysis across systems, thus focusing on the UK only.

The amount raised in taxes on t is determined by an influence function (I) that depends on the pressure (p) exerted by s and t and other variables (x):

$$n_t F(R_t) = -I_t(p_s, p_t, x). \quad (6)$$

Similarly, the amount available to subsidise s is determined by an influence function that also depends on political pressures and other variables.

$$n_s G(R_s) = I^s(p_s, p_t, x). \quad (7)$$

The political budget equation in (4) implies influence functions (6) and (7) are interdependent. Increased influence of s that raises its subsidy must be financed by increased taxes on t , and hence lower the influence of t .

⁵ $G(R_s) = R_s, G' = 1, G'' = 0$ when subsidies do not distort behavior; that is, when 'lump sum' grants are used.

That is,

$$n_t F(R_t) = -I^t \equiv n_s G(R_s) = I^s \quad (8)$$

or

$$I^s + I^t \equiv 0.$$

This equality between the amount raised in taxes and the amount spent on subsidies implies that the aggregate influence is zero: that increased influence of some groups decreases the influence of others by equal amounts.⁶

Differentiation of equation (8) with respect to any variable y gives

$$\frac{\partial I^s}{\partial y} \equiv I_y^s \equiv -\frac{\partial I^t}{\partial y} \equiv -I_y^t \quad (9)$$

Therefore, if, for instance, increased pressure by t raises its influence (and thereby lowers its taxes), the influence (and subsidy) of s would be lowered

$$I_t^t > 0 \Rightarrow I_t^s < 0. \quad (10)$$

Furthermore, since $I_{ts}^s = I_{st}^s$, if an increase in p_t raises the marginal product of p_s (if $I_{st}^s > 0$), then an increase in p_s would lower the absolute value of the marginal effect of p_t on I_s (for then $I_t^s < 0$ and $I_{ts}^s > 0$). Also, if some characteristics of a group, such as the occupation or ages of members, raise its influence, these characteristics would lower the influence of the other group.

Following his description of the influence function of a group Becker proceeds to consider the effects of competition among pressure groups. If $R_t > 0$ and $R_s > 0$, s would be considered the winner and t the loser from the political 'game' because the redistribution's to those subsidised, s , has increased and the redistribution's away from those taxed, t , has increased.⁷

⁶Therefore, the political game in this model is zero-sum in influence and negative-sum in taxes and subsidies because of deadweight costs.

⁷ The identity of winners and losers and the amount won and lost are not rigidly determined by the nature of the political system because they are also affected by the political activities of each group. Losers need not passively accept their fate but can trim their losses and the gains to winners by



Groups compete for political influence by spending time, energy, and money on the production of political pressure. To model this competition Becker assumes that each group has a function relating its production of pressure to various inputs:

$$p = p(m, n), \quad \text{where } m = \alpha n, \quad (11)$$

where α are the resources spent per member on maintaining a lobby, attracting favourable votes, issuing pamphlets, contributing to campaign expenditures, cultivating bureaucrats and politicians etc. and,

n is the number of members of the group.

Becker (1983) suggests pressure cannot decrease and generally increases when expenditures (m) increase.

Pressure is a function of total resources spent on maintaining a lobby and of the total membership. This suggests that even if no money is spent on political resources the number of members alone can have an influence.

The total effect of an increase in the number of members on the marginal product of political expenditures, with the amount spent per member held constant, is

$$\frac{\partial p_m}{\partial n} = \frac{\partial^2 p}{\partial m \partial n} = \alpha p_{mm} + p_{mn}. \quad (12)$$

The sign of the first term is determined by whether there are increasing or decreasing returns to the scale of expenditures. The second term tends to be negative because of free riding: each person wants to shirk his obligations and impose the cost of producing pressure on other members. If the incentive to free ride rises as the number of members rise the pressure produced by a given total expenditure (m) would fall as the number of members rises because the cost of collecting would rise. The requirement that $p_{nn} < 0$ in equation (11) captures the effect of numbers on free riding and the cost of producing pressure. Free riding can be partially controlled by policing behaviour etc.⁸ Basically, free riding raises the cost of producing pressure.

lobbying, threats, disobedience, migration, and other kinds of political pressure to raise their influence.

⁸ Also, punishing deviant members with ostracism, intimidation, and fines, and by implementing

Therefore, total expenditures on the production of pressure equals the sum of expenditures on direct political activity and on the control of free riding.

The full incomes of each member of s and t net of expenditures on political activities, including expenditures to control free riding are defined by,

$$Z_s = Z_s^\circ + R_s - \alpha_s, \quad \text{and} \quad Z_t = Z_t^\circ - R_t - \alpha_t. \quad (13)$$

Income per member of a politically active group ($\alpha > 0$) is maximised when,

$$\frac{\partial R_s}{\partial \alpha_s} = 1, \quad \text{and} \quad \frac{\partial R_t}{\partial \alpha_t} = -1, \quad (14)$$

and these conditions take account of all expenditures to control free riding.

A group would be politically active only if additional pressure raises its influence. The inequalities in (10) imply that pressure by each group reduces the influence of the other group, and thereby partially or fully offsets the effect of pressure by the other group.

The influence and pressure production functions permit a straight forward translation of the optimality conditions for s and t given by equation (14) into political market equilibrium conditions determining expenditures and pressure by both groups. Becker simplifies the analysis by assuming each group acts as if the pressure exerted by the other group is unaffected by its behaviour. (There exists a wealth of literature on group behaviour and whether or not other groups operating in the same market is a relevant determining factor (see for example, Kreps, 1990:pp328-330 and Varian, 1992:pp295-298). The above assumption is often used but generally recognised to be a gross simplification.)

$$\frac{\partial R_s}{\partial \alpha_s} = \frac{1}{n_s G'} \cdot \frac{\partial I^s}{\partial p_s} \cdot \frac{\partial p_s}{\partial m_s} \cdot \frac{\partial m_s}{\partial \alpha_s} = \frac{I_s^s p_m^s}{G'} = 1 \quad (15)$$

rules for sharing benefits and costs that reduce the incentive to shirk. Basically, free riding raises the cost of producing pressure. Therefore, total expenditures on the production of pressure equals the sum of expenditures on direct political activity and on the control of free riding.

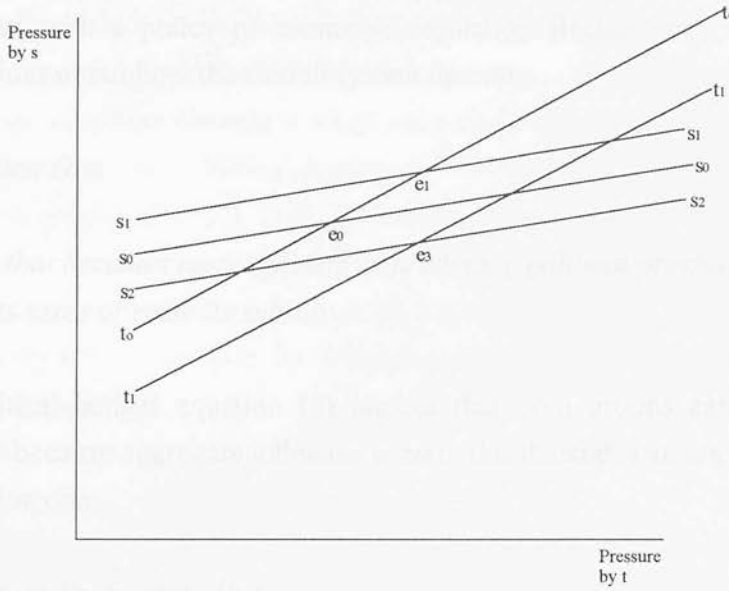
and using equation (9),

$$\frac{\partial R_t}{\partial a_t} = -\frac{1}{nF'} \cdot \frac{\partial I^t}{\partial p_t} \cdot \frac{\partial p_t}{\partial m_t} \cdot \frac{\partial m_t}{\partial a_t} = \frac{I_t^s p_m^t}{F'} = -1. \quad (16)$$

These conditions can be solved for equilibrium values of a_s and a_t , and p_s and p_t . They can also be used to derive the effect on the optimum pressure by one group of a given change in the pressure by the other group. Rising dead-weight losses from taxes and subsidies ($F'' < 0$ and $G'' > 0$) cause the optimal pressure by one group to increase when pressure by the other is raised. 'Complementarity' in the influence function of s between s and t ($I_{st}^s > 0$) also increases the optimal pressure by s when pressure by t is raised because additional pressure by s would then be more effective. However, Becker (1983) continues to point out that such 'complementarity' reduces the optimal pressure by t when pressure by s is raised because the negative effect on I^s of additional pressure by t is reduced.⁹ This is shown graphically in Figure 3.1 below.

⁹ Second-order conditions ensuring that (15) provides an optimal value of a_s , and (16) an optimal value of a_t are considered in the mathematical appendix of Becker's article 1983. Sufficient conditions are $I_{ss}^s < 0$, $I_{tt}^s > 0$, p_{mm}^s and $p_{mm}^t \leq 0$, $G'' > 0$, and $F'' < 0$.

Figure 3.1 Reaction curves of t and s



Becker assumes that the reaction curves of both s and t are positively sloped because dead-weight costs rise sufficiently rapidly as taxes and subsidies increase to dominate any offsetting effects from 'substitutability' in the influence functions. Stable equilibrium is implied in this example by the assumption that t 's reaction curve is steeper than s 's curve.¹⁰

If a group became more efficient at producing pressure its optimal production of pressure would be raised for any level of pressure by the other group. This would be illustrated by a shift upwards of the reaction curve of s in Figure 3.1 from s_0s_0 to s_1s_1 and the equilibrium position changed from e_0 to e_1 . Pressure by s would increase and pressure by t would also increase if its reaction curve were positively sloped. Regardless of the induced effect on pressure by t , the subsidy to s and the tax on t would be increased by an upward shift in s 's reaction curve.

¹⁰ This assumption is strongly satisfied when $I_{st}^s = I_{ts}^t = F'' = G'' = 0$ because then s 's reaction curve would be horizontal and t 's would be vertical.

Taking the above modelling of the effects of groups competition for political influence on each others taxes and subsidies and also on the overall taxes and subsidies associated with a policy of economic regulation Becker goes on to make some propositions about how the overall system operates.

Proposition One

A group that becomes more efficient at producing political pressure would be able to reduce its taxes or raise its subsidy.

The political budget equation (8) implies that both groups cannot increase their influence because aggregate influence is zero, this illustrates an important corollary to proposition one.

Corollary to Proposition One

The political effectiveness of a group is mainly determined not by its absolute efficiency - e.g., its absolute skill at controlling free riding - but by its efficiency relative to the efficiency of other groups.

Since economies of scale are important at low levels of expenditure on producing pressure, and since free riding is usually more easily controlled in small groups, a modest increase in the size of small groups would usually raise the marginal product of their expenditures because the benefit from a larger scale would exceed the cost from greater free riding. Continued expansion in size would eventually cause a decline in marginal products because free riding would become troublesome and scale economies less important. Beyond some point, Becker adds, marginal products may stabilise because further increases in size induce little additional effects or free riding (per member).

An increase in the size of a group lowers marginal dead-weight costs of subsidies or taxes (G' or F') because the subsidy or tax on each member of the group would be reduced. Therefore, the total effect of an increase in the size of a group on its influence depends on the effects on efficiency, subsidies, and dead-weight costs. To show this it is necessary to consider how dead-weight costs affect pressure, taxes and subsidies.

An increase in the marginal dead-weight cost of taxes (a reduction in F' in (16)) raises the pressure exerted by taxpayers essentially because a reduction in taxes then has a smaller effect on the revenue from taxation. On the other hand, an increase in the marginal dead-weight cost of subsidies (an increase in G' in (15)) reduces the pressure exerted by recipients because a given increase in the subsidy then requires a larger increase in tax revenue. Hence an exogenous increase in the dead-weight cost of both taxes and subsidies would shift the reaction curves of t and s to the right and downward, respectively, and change the equilibrium position from e_o to e_3 in Figure 3.1. Either the equilibrium pressure of t must increase, or the pressure of s must decrease, or both. However, the following proposition holds, regardless of the exact effects on pressure.

Proposition Two.

An increase in dead-weight cost reduces the equilibrium subsidy.

The cost of many programs, such as agricultural price supports has often been seen as unacceptably large. Yet proposition two implies that politically successful programs are 'cheap' relative to the millions of programs that are too costly to gather sufficient political support, where 'cheap' and 'expensive' refer to marginal dead-weight costs, not to the size of taxes and subsidies.

Since dead-weight costs encourage pressure by tax-payers and discourage pressure by recipients, tax-payers have an 'intrinsic' advantage in influencing political outcomes.

Combine equations (15) and (16) to get,

$$-\frac{\partial R_s / \partial a_s}{\partial R_t / \partial a_t} = -\frac{I_s^s p_m^s}{I_t^s p_m^t} \cdot \frac{F'}{G'}. \quad (17)$$

If s and t were the same size ($n_s = n_t$), equally efficient at producing pressure ($p_m^s = p_m^t$, when $m_s = m_t$ and $n_s = n_t$) and equally important in the influence function ($I_s^s = -I_t^s$ when $p_s = p_t$), then (17) would imply that,

$$\frac{-\partial R_s / \partial a_s}{\partial R_t / \partial a_t} = \frac{F'}{G'} \quad \text{when } p_s = p_t. \quad (18)$$

The intrinsic advantage of tax-payers is measured by the right-hand side of (18) and increases as dead-weight costs of taxes and subsidies increase, as F' falls and G' rises. Subsidised groups can overcome their intrinsic disadvantage with an optimal size, efficiency at producing pressure, success at converting pressure into influence, or with characteristics that raise their influence. The presumption must be that heavily subsidised groups, such as farmers in the EU, not only can redistribute with relatively low dead-weight cost but also can overcome their intrinsic disadvantage with political appeal and efficiency.

Proposition two implies some tyranny of the status quo because the political sector would not interfere much with the private distribution of income even when groups benefiting from interference are better organised politically than groups harmed, as long as they are not much better organised. Consequently, the importance of the private status quo does not imply that politicians are lackeys of the rich, and is even consistent with the poor being more effective politically. However, this may not be the case where the politically strong are 'wealthy' landowners and the environmental lobby is represented by mainly middle class membership.

This tyranny of the status quo is not the same as laissez faire because the political sector would protect the status quo against many shocks and changes in the private sector.

Economists have traditionally explained political behaviour not by the power of interest groups but by market failure. Governments produce public goods, reduce externalities and overcome other failures. Becker suggests that although these political activities raise rather than lower aggregate efficiency, they can be readily incorporated into the previous analysis of competition among pressure groups for political influence.

Activities that benefit all groups are opposed by none and may be actively supported by pressure from some of the groups. More challenging to the analysis are activities that also raise efficiency but harm some groups (say t) who may exert pressure in opposition. The 'tax' on t would still finance the 'subsidy' to s according to the political budget equation in (4) except that now efficiency would be raised because $n_s R_s > n_t R_t$. If efficiency were also raised at the margin, that is, if $n_s \partial R_s > n_t \partial R_t$, subsidised groups have the intrinsic advantage in influencing political outcomes, for equation (18) implies that s has the intrinsic advantage when $F' > G'$, which is the necessary and sufficient condition for an increase in the subsidy to raise efficiency.

Subsidised groups with an intrinsic advantage exert more pressure than taxed groups of the same size, efficiency, and political appeal. Since political policies strongly supported by pressure from subsidised groups are likely to win out in the competition against other policies, those policies raising efficiency are likely to win, unless the groups harmed offset their intrinsic disadvantage with efficient production of pressure or in other ways. This result is stated as a corollary to proposition two.

Corollary to Proposition Two.

Political policies that raise efficiency are more likely to be adopted than policies that lower efficiency (because they lower the dead-weight costs).

This corollary indicates that the model of competition among political pressure groups to advance their own welfare does not neglect market failures. Becker explains that the model does not emphasise political redistribution of income at the expense of political increases in efficiency, even though groups do not co-operate and side payments are not permitted. So, an analysis of non-co-operative competition among pressure groups can unify the view that governments correct market failures and what has seemed to be a contrary view that governments favour the politically powerful.

Since an increase in n_t reduces the tax required on each person to obtain a given revenue (when the assumption of marginal gains is held) an increase in n_t would reduce their production of pressure (less of a stimulus for n_t). So a group would prefer its subsidy to be financed by small taxes on many persons even when that does not increase the efficiency of taxed groups. The optimum size of a subsidised group is less than its most efficient size because an increase in the number of members reduces the net income per member if efficiency does not significantly increase. This is stated as proposition three.

Proposition 3.

Politically successful groups tend to be small relative to the size of the groups taxed to pay their subsidies.

This is simply because it is easier to organise small groups receiving large subsidies, than large groups (taxpayers) losing relatively small sums. A good example of a well-organised, politically successful but small organisation in terms of the proportion of the UK population it represents is the National Farmers Union.

Both t and s would lobby and otherwise exert political pressure in favour of the most efficient method of taxing t (assuming that the method of subsidising is unaffected) because both groups are better off with the efficient method. Therefore:

Proposition Four.

Competition among pressure groups favours efficient methods of taxation.

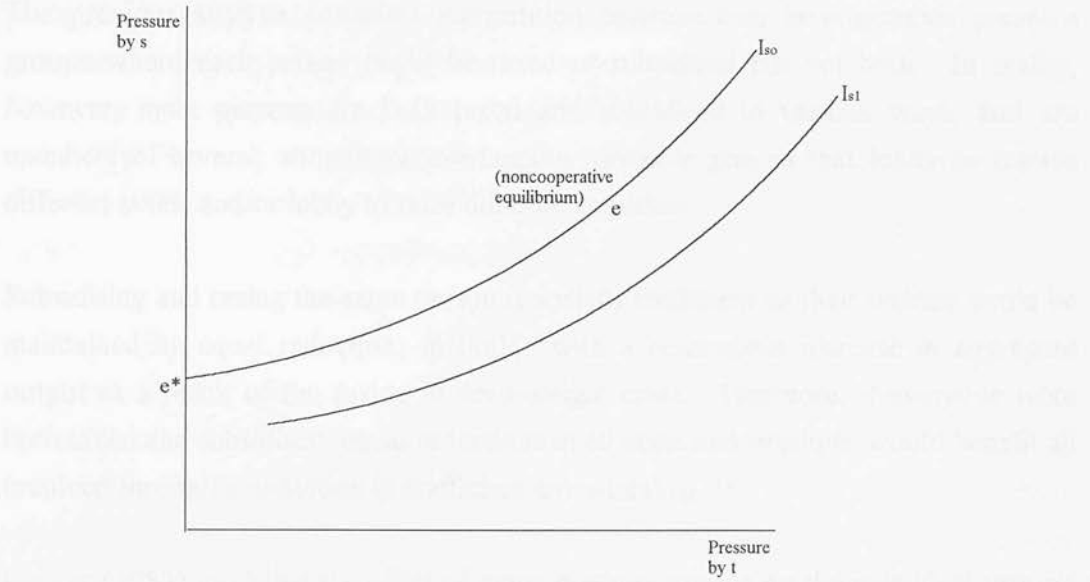
Proposition four means that if all subsidy methods also yield the same tax revenue when pressure is given, replacement of a less efficient by a more efficient subsidy would raise the subsidy to s at the initial equilibrium. If the marginal loss at the initial equilibrium were larger with the more efficient than with the less efficient method, the optimal pressure by s would be reduced, and t as well as s would be made better off by the more efficient method. Both groups then favour more efficient methods of subsidising s . However t would be made worse off by more efficient subsidies if they induced greater pressure by s .

Consequently, non-co-operative competition among pressure groups for political influence sometimes, but not always, favours efficient subsidies.

If the above is true then direct subsidies to farmers would not necessarily be considered to be more efficient than restrictions on acreage. Direct subsidies to farmers may encourage entry by new farmers (producers) that can dissipate the gain to existing farmers. Becker (1983) refers to Gardner (1987) who shows that acreage restrictions are more efficient than output subsidies at raising the incomes of established farmers when the supply of farmers is elastic.

Becker (1983) makes the point that what would seem a more efficient policy may in fact be less efficient when one considers overall efficiency or overall welfare. Alternatively, a seemingly inefficient public policy may be more efficient than a seemingly efficient private company policy because intentional subsidies by government are not included in the definition of 'output'. For example a public policy can support more workers, restrict entry etc. This of course depends on how output is defined and what the criterion of efficiency is.

Figure 3.2 Influence indifference curves



The influence indifference curves are positively inclined since greater influence by one group reduces the influence by the other so reduced pressure by both could maintain their influence and hence raise both their net incomes by economising on political expenditure.

Expenditures on the production of pressure are not Pareto optimal because all groups could be made better off by reduced expenditures. Since the influence indifference curves shown in Figure 3.2 are positively inclined because greater pressure by one group lowers the influence of the other group, reduced pressure by both groups could maintain their influence, and hence would raise both their net incomes by economising on political expenditures. As point e^* in this figure indicates, Pareto optimality is attained when one group (t in the figure) does not produce any pressure.

Co-operation among pressure groups is necessary to prevent the wasteful expenditures on political pressure that result from the competition for influence. Co-operation is difficult, however, because each group wants other groups to reduce their pressure and tries to evade restrictions on its own efforts.

Beckers theory of multi pressure group influence.

The previous analysis considers competition between two homogeneous pressure groups where each person might be taxed or subsidised but not both. In reality, however, most persons are both taxed and subsidised in various ways, and are members of several, sometimes overlapping, pressure groups that lobby to reduce different taxes, and/or lobby to raise different subsidies.

Subsidising and taxing the same person is socially inefficient as their welfare could be maintained by equal reductions in both, with a consequent increase in aggregate output as a result of the saving in dead-weight costs. Therefore, if everyone were both taxed and subsidised, equal reductions in all taxes and subsidies would benefit all involved through a reduction in inefficient cross-hauling.¹¹

Becker (1983) modelled the effect of many pressure groups on the individual group's 'pressure production functions' and influence functions. A brief resume is given below. (The comparative statics are similar to those derived earlier for two groups, therefore the detail is not necessary within the context of this chapter.)

According to Becker (1983) the net influence of many pressure groups tends to be greater when there are,

- More efficient groups;
- Subsidised groups with smaller dead-weight costs (smaller G');
- Taxed groups with larger dead-weight costs (larger F');
- Groups with intrinsically more influence;
- Subsidised groups whose benefits are financed by a small tax on many persons.

¹¹Cross-hauling is when those individuals being taxed are simultaneously being subsidised and overall efficiency decreases.

Beckers (1983) model implies extensive political general equilibrium reactions to changes in the behaviour of any group.¹² This suggests that there exists a set of prices (taxes and subsidies) that would ensure that equilibrium exists in the market and that if disruptions occur there is a tendency to return to equilibrium. The process continues until a new political general equilibrium is reached with the possibility of quite different pressures and gains by many groups. As a consequence of the political budget constraint, $n_s G(R_s) = S = n_l F(R_l)$, increased pressure by one group may set in motion reactions through the political system.

Voting and Influence

The neglect by Becker (1983) of voting preferences is deliberate because he perceives them to not be a crucial independent force in political behaviour. Voter preferences can be manipulated and created through the information and misinformation provided by interested pressure groups, who raise their political influence by changing the revealed preferences of enough voters and politicians. There is, however, only a weak incentive to become informed about political issues because each individual has only a minor effect on political outcomes decided by the majority.

Members of pressure groups have incentives to free ride that are similar to the incentives of the voter to remain uninformed. Relatively small and homogenous pressure groups do not reach decisions by a simple majority vote, and can therefore limit free riding by permitting more informed or affected members greater influence with the group. Becker (1983) goes on to say that it is evident only groups that are relatively efficient at limiting free riding become politically powerful.

¹² General equilibrium analysis being the study of the behaviour of economic - or political - variables taking full account of the interaction between those variables and the rest of the economy.

Becker's (1983) approach departs from what is termed the 'co-operative game tradition'¹³ by

- not explicitly modelling coalition formation;
- by dropping the unrealistic assumptions that the preferences of voters are fixed and that all votes have the same 'price'; and,
- by emphasising the importance of the following: dead-weight costs of taxes and subsidies; free riding; and other costs of organising pressure groups and the capacity of losers to limit the political gains of winners.

Implicitly, coalitions are formed by the expenditures of pressure groups on influencing the revealed preference of voters. However, the cost of a vote is not equal to all pressure groups or for all voters as some groups are more efficient at 'buying' votes and some voters are more easily persuaded. Becker (1983) suggests explicit modelling of coalition formation would surely add to the power of the approach.

3.4.3 Summary and conclusions of Beckers theory

To summarise therefore, there are six main elements to Beckers theory of public policy which is built on competition among pressure groups for political favours.

1. The influence of pressure groups is determined by pressure produced by all groups.
2. Each group is assumed to maximise the income of its members under the assumption that additional pressure does not affect the political expenditures of other groups. Equilibrium expenditure on pressures and equilibrium incomes of all groups are determined from these maximising conditions and from the political budget equation.

¹³ Cooperative game theory first introduced by J von Neumann and O Morgenstern in 'A Theory of Games and Economic Behavior' (1944). This is the application of the theory of games to economics and is concerned with the study of the optimal strategies to maximise pay-offs, given the risks involved in judging the responses of adversaries. Games are classified into *zero-sum*, in which one player's loss is another's gain, *non-zero*, in which one player's decision may benefit all players; *co-operative* in which collusion is possible and *non-co-operative* in which it is not.

3. Political equilibrium depends on (i) the efficiency of each group in producing pressure, (ii) the effect of additional pressure on their influence, (iii) the number of persons in different groups and (iv) the dead-weight costs of taxes and subsidies.
4. Efficiency of a group is determined by its size and its ability to control free-riding.
5. According to Becker (1983), one of the most important variables in his analysis is dead-weight costs of taxes and subsidies. From this he makes a number of observations:
 - (i) dead-weight costs generally rise at an increasing rate as taxes and subsidies increase.
 - (ii) An increase in the dead-weight cost of a subsidy discourages pressure by the subsidised group because a given revenue then yields a smaller subsidy. An increase in the dead-weight cost of a tax encourages pressure by taxpayers because a given reduction in their taxes then has a smaller effect on the amount available as a subsidy. Therefore, dead-weight costs give taxpayers an intrinsic advantage in the competition for influence.
 - (iii) Groups that receive large subsidies presumably have managed to offset their intrinsic disadvantage by efficiency, an optimal size or easy access to political influence.
 - (iv) As dead-weight costs to taxpayers fall as the tax per person falls the opposition of taxpayers to subsidies decreases as the number of taxpayers increases. Therefore, groups can more readily obtain subsidies when they are small relative to the number of taxpayers (this explains the political success of farmers in rich countries).
6. Becker (1983) points out that his paper is relevant not only to taxes and subsidies that redistribute income but also to policies that raise efficiency by the production of public goods and the curtailment of other market failures. Policies which raise efficiency are likely to win out in the competition for influence because they produce gains rather than dead-weight costs.

3.5 Critique of the theory

There has been no empirical application of this aspect of Becker's work and so there are no indications as to its applicability in real-world cases. This lack of empirical evidence and the inappropriate methodological approach, that is, mathematical modelling inherent in neo-classical theory, abstracts from reality to a degree which results in important theoretical elements being excluded. Mathematical modelling is proposed in this thesis to be unsuitable for understanding and exploring determinants of government expenditure because from the outset it presupposes a sharp restriction of vision and requires abstraction and reduction beyond any useful means. A further consequence of Beckers methodological approach results in a lack of many explicit definitions in his model and Becker leaves the reader having to draw implications from his theory.

The centrality of '*homo economicus*' and consequently rational behaviour in determining political outcomes narrows the analysis to a point where it is impossible to include altruistic behaviour, in any practical sense. Altruistic behavior is proposed in this thesis to be demonstrated by environmental and conservation interest groups. While the use of rational economic man may be sufficient in a two dimensional model in which only producers and consumers compete for promotion of their economic interests, in a more complex theory in which the 'game' is multi-dimensional and multi-interest, '*homo economicus*' is only one element in a broader range of interests. Beckers (1983) use of dead-weight costs of policies as the pivotal variable in group competition is therefore also considered simplistic. Non-monetary variables which initiate group competition should be included. It is proposed in this thesis that a property rights argument (Bromley, 1991) broadens the analysis and contributes more to the understanding of land use policy-making. This is discussed in detail in the following chapter.

The 'supply side' of the political market is defined, in this thesis, as the existing political/institutional structure (civil service, departmental and non-departmental government bodies) which makes policy decisions and administers policy. In other words, the supply side is considered to be the public arena which 'supplies' policy to the private arena. Becker treats this 'supply side' as a 'black box'. The 'black box' includes influences other than pressure groups (external influences) and Becker does not differentiate or distinguish between each external influence but rather amalgamates them into a single variable 'x'. The 'black box' treatment of external

influences (such as the EU, international political markets, the media and public opinion) results in a gross oversimplification which hinders rather than aids understanding of political influences and policy-making. Becker implicitly assumes that government simply mediates the interests of all-powerful pressure groups and has no agenda of its own.

The final general criticism of Beckers (1983) model is the use of equilibrium analysis which in neo-classical economic theory assumes that the 'technical' efficiency inherent in market transactions results in a socially optimum outcome (social efficiency). That is to say that by allowing interest groups to compete on the political market in an attempt to minimise technical inefficiencies (dead-weight costs) and because the market tends towards equilibrium in the long run, a socially optimal outcome will inevitably be achieved. 'Optimal' in this sense is defined in terms of social efficiency and does not make reference to the redistributive effects of policies. Equilibrium analysis, while being a 'tidy' methodology, does not prove to be robust when the essence of group competition (dead-weight costs) is questioned and shows itself to be a theoretical tool with extremely limited practical use. In addition to this, even if equilibrium analysis were theoretically realistic, data collection in order to empirically test the model would prove to be impossible. For example, political scientists recognise the difficulty in quantification of variables such as power and influence.

The following discussion explores the main areas to be addressed in the thesis. The discussion is divided into three main areas: (i) interests of pressure groups and individuals; (ii) the role of government; and, (iii) and the importance of the 'supply-side' of the political market (Becker's 'black box').

3.5.1 Interests of pressure groups and individuals

It is questionable whether the motivations of interest groups, or the stimulus of political activity, is centred on technical efficiency of policy. Beckers (1983) focus on economic efficiency leads him to emphasise correction of market failure as an important motive for regulation. Although the costs of policy are recognised to be an important variable in the determination of policy choices, rather than focusing a theory of policy choice on the dead-weight costs of policy, these costs will be included in the proposed theory as one of a number of determinants. That is to say, the hypothesis is that it is influential bureaucrats working directly with budget allocation who, in recognising the size and extent of dead-weight costs associated

with a policy, are likely to be receptive to pressure groups advocating a more 'efficient' (and less expensive) policy alternative. Proposed motivations of pressure groups and individuals are discussed in the following chapter.

Becker assumes that all pressure groups compete to maximise their members' utility. Utility in its broadest sense may be dependent upon non-monetary benefits such as altruism (pleasure from protecting the natural environment for future generations), enjoyment of the natural environment (Jacobs, 1991) or income maximisation (maximising subsidies or minimising taxes). Becker recognises this broad definition of utility and while conceptually this appears to be the case the utility of different groups or individuals will not necessarily be open to quantification and therefore the use of income as a measure of utility is not suitable for a general application. Furthermore, Beckers (1983) assumption that utility functions are additive and that each group chooses to maximise the utility of its members (where optimal expenditures are conditional on the political budget equation and pressure production function) embodies his analysis with a false impression of accuracy and in fact, *"those effects that happen not to have the aura of scientific respectability are disregarded in a process that commits the fallacy of misplaced concreteness"* Daly et al (1990:p224). This is what Viner (1961, cited in Bromley, 1991:p230) describes as the *"fallacy of the unexplored remainder"* and this point is further emphasised by Hutchison

"...the majority of economists are not necessarily completely devoted to exclusively materialist goals but rather [that] they are inevitably tempted to focus on measurable, quantitative objectives rather than qualitative non-measurable ones, and measurable goals inevitably tend to be somewhat materialistically conceived. As is well known, qualitative elements...largely elude indices of production or consumption" (Hutchison, 1964 cited in Bromley, 1991:p224).

Becker (1983) implicitly assumes 'symmetry of information and objectives' between members and interest groups leaders. That is, it assumes that a groups aims are representative of members. However, while the pressure group relies on subscriptions there is not necessarily an asymmetry between groups and their leaders and hence maximisation of members' utility is not necessarily a basic determinant of all groups levels of competition. It seems reasonable to propose that the level of pressure exerted by a group is also determined by resources available and the political climate within which they operate. It is necessary for a successful group to have a strategic decision-making policy in order for it to respond to the dynamic nature of politics and this strategic policy is likely to be relatively independent of members whose

involvement in group activities is generally dormant, particularly groups such as Greenpeace or RSPB who are relatively autonomous. Also large interest groups such as NFU can not be representative of all their members, all of the time.

The final element to be discussed in this section addresses Beckers proposition that policy determination is centred on the failure of economic markets and the resulting struggle between pressure groups for efficiency in the distribution of subsidies and taxes. Although obviously there is a market for regulatory decision, it is considered to be more helpful within the context of this study to explicitly analyse policy-making in terms of '**political markets**'. Hence the 'efficiency' of political markets focuses not on the dead-weight losses associated with given policy options but the degree of information asymmetry between the regulated industry (agriculture), other interested parties (environmental and conservation pressure groups) and the political principal (government). The asymmetries are proposed to be a result of 'policy entitlements' (Bromley 1991, Hodge 1989) historically established by the farming and landowning community in the UK and who have, as a result, enjoyed 'insider' status in policy-making (Grant, 1989). 'Policy entitlements' are what have maintained the status quo property rights and mean that the market for land use policy is not 'perfectly competitive'. This is discussed in more detail in the following chapter.

3.5.2 The role of government

Becker (1983) openly resists the notion that governments might have their own agenda. This is illustrated in the following quote,

"Redistribution in democracies would not be guided by social welfare functions or other measures of social fairness, but mainly by the altruism, selfishness, envy, and morality of the more powerful interest groups" (Becker, 1985).

Therefore, Becker is simply saying that policies are determined by the political influence of powerful interest groups. Government seeks to maximise its own support by meeting the policy demands of the most powerful interest groups. Borcharding (1985) points out that this new cynicism '*of government as selfishly redistributive*' neglects the role of productive expenditure by governments. Empirical evidence from policy analysis (Rausser 1990) illustrates that the state can be and is active, with its own agenda and social welfare objectives. Rausser and Foster's model of Political Preference Functions and Public Policy Reform (1990) suggests that government seeks to maximise its support from social groups through a

combination of two types of policy. The first is *increasing* social welfare by what is described as, Political Economic Resource Transaction Policies (PERTs), and the second is concerned with *redistributing* social welfare, Political Economic-seeking Transfer Policies, (PESTs). Traditionally, analysis of public policy reform tends to focus on PESTs. Rausser and Foster (1990) assume policies are in place in part because they serve the interests of those with relative political power and influence but also to serve a welfare function. This latter function indicates the possibility of governments being active with their own agenda.

Whilst PESTs redistribute wealth and are not directly concerned with efficiency, PERTs directly affect efficiency by reducing transaction costs in the private sector by, for example, correcting market failures by providing public goods. This joint product approach to public policy avoids the extreme view found in much of the literature that focuses on government failures or on market failures corrected by benign governments.

The market-exchange effects of PERT in equilibrium reduces producers benefits, but increases total wealth. That is to say, the distribution of benefits change to the detriment of producers. Producers acting as a coalition may obstruct the implementation of a PERT unless they receive adequate compensation. Rausser and Foster (1990) suggest compensation could be achieved by introducing a PEST to transfer some wealth resulting from the new PERT equilibrium to producers. Despite this apparent transfer of wealth it may be a means of securing the PERT as an inefficient rent-seeking based policy. In other words the PEST acts as a form of compensation to producers in order to implement the PERT which reduces the producers rents (profits). It is therefore important that the social costs of PESTs are not judged in isolation reinforcing Beckers (1983) claim that inefficient public policy may be more socially efficient than an apparently more efficient private policy. There are a range of possible balances between PERT and PEST for securing political power. Consequently the Rausser and Foster (1990) framework has three main dimensions which include (i) the level of PEST intervention, (ii) the level of PERT intervention and (iii) the choice of the policy instrument mix.

The policies accomplishing wealth transfer cannot be isolated from the policies providing public goods. What may appear to be socially wasteful and incoherent agricultural programmes (known as 'socially inefficient transfer schemes') may in reality be rationally designed schemes of compensation for larger, longer-term policies

which expand total societal welfare. Therefore, the social costs of PESTs should not be judged in isolation. To ensure the political viability of some PERTs a degree of social cost may be incurred in the implementation of 'inefficient transfer schemes'.

Beckers focus on the *efficiency* of policies as being a major determinant of taxes and subsidies appears too simplistic. What he appears to be referring to is technical efficiency leading, by default through equilibrium analysis, to social efficiency. However, Rausser and Fosters' attention on the *social efficiency* of policies draws on Beckers recognition of the potential societal contribution of policies and thus, enable the concept of efficiency to not only be more intelligible but also to be a more plausible determinant of policy choice. In short therefore, their model addresses the redistributive effects of some policies and contributes to the understanding of efficiency. Rausser and Fosters concept of the achievement of social optimality through the mix of policies clarifies the use of 'efficiency' - there are two levels of efficiency: technical and social. Furthermore, their model marries the efficiency and redistribution (or equity) implications of policy choice.

Gardner (1987) proposes the idea, in support of Rausser and Foster (1990), that agricultural programmes are essentially income redistributional measures or in Rausser and Fosters terminology a PEST. Gardner (1987) emphasises the importance of the cost to producers of generating political pressure and the social cost of redistribution in his attempt to explain variations in producer protection afforded by farm price support programs since the 1930s.

These variables influence the extent of intervention consistent with the economic view of politics according to which policy results are basically analogous to the supply and demand equilibrium of a competitive market.

The governments choice problem is reflected through the effects of its actions on a government support function, S , where $S = S(S_c, S_f)$ and S_c represents the consumers support and S_f represents the producers support. Politicians institute policies to maximise popular support from the two groups. Government realises its actions affect economic welfare of the two groups and their welfare is directly related to their political support. Given government actions the levels of surpluses are determined by the group's individual members consuming and producing in response to market incentives and government policies. So government has to decide on the combination of policy that optimally trades-off consumer and producer support through manipulation of their welfare. Therefore it is these groups that set the political environment in which the government allocates society's total welfare between consumers and producers.

Figure 3.3 Society's total welfare



The governments choice of PESTs and PERTs is constrained by: (i) the current state of technology; (ii) the state of managerial ability of politicians; and (iii) the state of theoretical and conceptual foundations on which to build policy.

These constraints place limits on the total available economic surplus possible and create a social cost of transfers between groups. Furthermore they provide boundaries within which interest groups can operate and suggest such groups are not all-powerful. This latter point is substantiated by the current existence within the UK of a weak environment policy and a well subsidised agricultural policy. The supply-side critique requires a more explicit definition of the role of government in policy determination. The third constraint provides scope for the introduction of an environmental ethic into the equation of determinants of government expenditure.

Rausser and Foster (1990) endeavour to model the governments' policy choice problem. The government chooses a level of consumer and producer surpluses within the constraints described above which also seeks to optimise public support. Governments allocation of surpluses is dependent on the degree of rewards (rise in support) and penalties (fall in support) offered by each group; and each group offering more rewards and penalties as they become more responsive to changes in their collective welfare.

Distribution of resources

Economics is generally defined as the allocation of scarce resources between competing social objectives. Given an initial distribution of resources how would economic agents behave so as to improve their welfare? According to Pareto the agents would exchange commodities until no agent could be made better off without making at least one other agent worse off. Provided that the initial distribution of property rights is equitable allocative efficiency gives rise to the best of all possible worlds.

Many economists have maintained though that allocative efficiency is insufficient to maximise social welfare and a social welfare function is required to discriminate a social optimum from the array of efficient allocations that correspond to alternative assignments of property rights. Because a satisfactory form for a social welfare function has remained elusive to economists, a sharp line of demarcation has been drawn between questions of efficiency and equity.

Daly and Cobb (1990) argue that in resource economics the line is often crossed: 'optimal depletion' may be used where in fact 'efficient' depletion is meant. This overlooks potential improvements in social welfare achievable through the

reassignment of property rights across generations (i.e. time preference).

Baumol and Oates (1988) describe Pareto Optimality as a "*weak criterion which sweeps under the rug the issue of distribution*".

Allocative efficiency generally receives most attention from economists while distributional issues attract relatively little attention. That is, the redistribution of public resources in the political market to powerful interest groups is determined by market forces and not addressed as an issue for which planning decisions could be made.

Becker (1983) discusses the outcome of political competition as achieving a socially optimal equilibrium consistent with the Pareto criterion. In addition to the point that using the Pareto rule, though efficient does not necessarily achieve the socially optimal distribution of resources, there are two further points. Firstly, the Compensation Principle, though included in the theoretical model is rarely applied,¹⁴ and secondly, the initial distribution of property rights is generally such that the balance of interests represented on the political market are skewed thus interests do not compete on a 'perfect market' but rather one which has asymmetries of information, barriers to entry (into policy-making) and differences in the numbers of groups representing interests (for example agriculture has one large group, the NFU, and conservation interests are made up of a large number of various sized groups). The centrality of the perfectly informed, rational economic man, '*homo economicus*' implies the maximisation of utility (measured in terms of income) and the rationality of pressure groups behaviour omits the complexities associated with altruistic behaviour.

The impacts (costs and benefits) of nature conservation policy can not readily be quantified in economic terms and thus the actual contribution of nature conservation to society's welfare is recognised as elusive. Therefore, although Harberger (1971) offers a framework ¹⁵ for evaluating social welfare there remain difficulties associated

¹⁴ The compensation principle: the principle that total economic welfare increases from a change in the economy, if those who gain from the change could compensate those who lose from it to their mutual satisfaction. It is not necessary for money transfers to actually take place. The principle has been criticised in this respect because without actual transfers, inter-personal comparisons of utility of money are implied. Actual transfers are required if individuals are to reveal the total worth they place on their gains and losses.

¹⁵ Harberger offers three basic postulates to provide a conventional framework for applied welfare economics (or Cost Benefit Analysis). 1. The price for a given unit measures the value of that unit to the demander; 2. The supply price for a given unit measures the value of that unit to the supplier; 3.

with quantification of the social welfare function. Essentially this is because the impacts have not been traded in a market, although recent SSSI settlements could be inferred as quasi-market conditions with a willing buyer and a willing seller.

Rausser and Foster remain within the framework of neo-classical economics which seeks equilibrium outcomes and maintains a two dimensional model. One of the fundamental drawbacks of Rausser and Foster's model (in common with Becker's theory (1983)) is the two dimensional approach. This approach suggests only the two opposing interests of consumers versus producers and taxpayers versus those subsidised and all those taxed would come under one interest (for example, in a land use dispute, recreationists, conservationists, economic developers could all be taxpayers) and all those subsidised (farmers, landowners, foresters) would also come under one interest in such a model. In reality, interests are likely to be multidimensional with a significant degree of overlap. In addition to the spectrum of interests of pressure groups, the interests of public officials within government (department and quango) also must be recognised as having influence on policy-making.

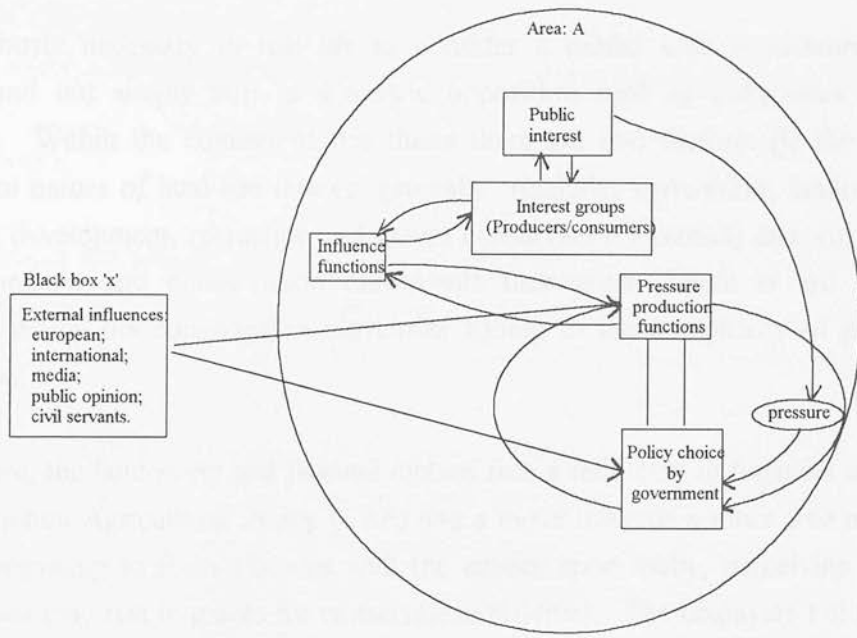
3.5.3 The importance of the 'supply-side' of the political market: (Becker's 'black box')

Discussion of Rausser and Foster's theory leads on to the second supply side issue concerning the lack of explicit definition by Becker (1983) of what 'x' means and as a result the over simplification of the political market. While the integral nature of special interest groups to the political process is accepted in this thesis, what is also proposed is that policy choice is not solely defined by their activities and redistribution of government resources is considered to be affected by many factors, including the orientation of public officials. In addition to including the influences of other agents (government officials, EU officials, media) and not just powerful pressure groups, it is also crucial to illustrate how influence functions are generated from the competition among interests for the distribution of property rights at the local community level which then filters up through the political process to the

When evaluating the costs and benefits of a given action the costs and benefits accruing to each member of the relevant group should normally be added without regard to the individuals to whom they accrue. Harberger's methodology fails to address the conflict of social connotations with a market orientated account of externalities. So although we need some recognition of a more active state the inclusion of Harberger's 'social welfare function' is not satisfactory. Use of the technique is contentious and is still based on the orthodox 'rational economic man'.

national policy-making level and the resulting determination of policy.

Figure 3.4 An extended framework



The above system is one element of an extended construct. It is proposed within this thesis that there exists a wider framework which includes external influences such as the EU, international policy, media, public opinion and civil servants on decision making by government. (This may be the 'black box' which Becker (1983) refers to but does not define.)

In Becker's model (1983) the area between 'Pressure production functions' and 'Decisions by government' (Area 'A') up to now has excluded a wide range of other actors (e.g. public officials). However, in this thesis the theoretical net is cast to include a wider range of individuals and organisations which are considered influential in the process. Furthermore, the direct translation of pressure production by pressure groups into decisions by government is not explained and considered to be too simplistic. Institutional factors are often among the most formidable obstacles to the development and implementation of policies according to Ingram (1984). Ingram recognises the importance of institutional factors in the success of water resource planning and evaluation and as a result provides guidelines for gathering and analysing relevant information on institutional factors. Ingrams (1984) rationale (in support of

the above critique) for including factors such as orientation of public officials and the resources actors have available to pursue their interests provide sufficient reason to include them in the alternative theory being proposed in this thesis.

It is obviously necessary in real life to consider a model with multidimensional interests and not simply two in diametric opposition such as consumers versus producers. Within the context of this thesis there are two factors: (i) the multi-dimensional nature of land use interest generally (includes agriculture, landowning, landscape, development, recreation and nature conservation interests) and, (ii) within the environment and conservation movements themselves. There is not always consensus within the conservation movement adding to the complexity of political competition.

Furthermore, the landowning and farming lobbies face a reduction in financial support of the Common Agricultural Policy (CAP) and a move towards a more free market, they are beginning to form alliances with the conservation lobby, perceiving future land incomes may rest in grants for conservation activities. The taxpayers bill for the CAP subsidies may decrease in the future but it is probable that subsidies for environmental payments will rise. Therefore, overall support to landowners and farmers as an 'exceptional' industry is likely to remain constant but the forms of support and *raison d'être* will move from being production oriented to being more environmentally sustainable and directly supportive of rural communities. In terms of understanding the political market for policy choice the trend towards increasing overlap of land interests adds to the overall complexity of the system.

Finally, although Becker (1983) accepts the size of groups might change as those that are politically successful expand, he does not take account of this within the model. He makes an explicit assumption that active pressure groups have stable influence functions and that the size of each group is fixed. Also, although in reality taxes are annual or semi-annual, the government actually makes some long-term decisions particularly those associated with the natural environment. Long-term decision-making will come about as a result of an extended period of consultation with relevant interests and discussion with policy-making arenas. As groups gain public support and influence over time, so their impact on decisions will increase. This time dimension is crucial to the understanding of policy choice.

The above discussion outlines the main theoretical and methodological problems with Beckers theory. This review highlights two basic methodological flaws; (i) it assumes groups pursue self-interest; and, (ii) that all decisions at all levels are based on economic rationality. In pursuit of a theory of environmental policy-making a move away from this mathematically, reductionist method is proposed towards a broader approach which addresses the complexities of the political system identified above.

3.6 Discussion

The movement towards regulation of agricultural economic activity for protection of the environment has evolved and to some extent consolidated its position with acts of parliament in 1949, 1968, 1981, 1985 and 1990. Public Choice theory has derived from Economic Theory which was born in a wave of enthusiasm for the notion that regulatory agencies are 'captured' by producers. Since then, Economic Theory has evolved towards an emphasis on the coalitional aspects of politics where the need to balance pressure emanating from competing interests plays a central role. The essential points of contemporary Public Choice theory are the following: (i) that compact well organised groups (i.e. producer groups) tend to benefit more from regulation than broad diffuse groups; (ii) regulatory policy will seek to preserve a politically optimal distribution of rents across the board. Thus, over time the policy will tend to offset changes in this optimum distribution arising from shifts in demand or cost conditions; and, (iii) because the political payoff to regulation arises from distributing wealth, the regulatory process is sensitive to dead-weight losses. Expensive policies, that is, with high dead-weight costs and therefore which reduce the total wealth available for distribution will be avoided because they reduce the political payoff.

Beckers theory of Competition Among Interest Groups for Political Influence represents the neo-classical approach by economists to political economy (policy science with an economic methodology). While there exist a number of methodological and theoretical difficulties in adopting Beckers Public Choice model in a real world case, there are several key concepts which contribute to the overall understanding and are thus carried forward into the alternative paradigm in the following chapter.

The central concept of Beckers theory, the importance of interest groups and the competition of interests in the political market for the distribution of government resources, are essential to the formulation of an alternative paradigm. There are also a number of intuitive propositions which are key to the understanding of government decision-making. These include:

- government intervenes to correct market failure;
- the importance of the costs of policy in determining government intervention;
- government favours the politically powerful (and influence is determined by the level of pressure production (political expenditures) plus their intrinsic influence);
- the tyranny of the status quo. The political sector will not interfere much with the private distribution of income even when groups benefiting from interference are better organised politically than groups harmed as long as they are not much better organised;
- the relative influence of interest groups and the interdependence of their influence functions are important determinants of government decision-making.

The above propositions are carried forward and incorporated into the alternative paradigm. Having identified the importance of the competition of interests, the actual interests will be explored in more detail with a more explicit illustration of how property rights are redefined on the political market. National and local policy arenas are linked through competition over property rights and information exchange.

Public Choice theory is considered in this thesis to be *"an important piece of intellectual capital that is not yet fully depreciated"* (Levine, 1989 in Peltzman, 1989).

In reference to the political element of the analysis, Levine suggests that we need a meta theory which examines the areas left unexplored. To answer the question of how the government allocates budget or what motivates them towards making provisions for economic regulation we must broaden our horizons and look outwith the discipline of economics. It is evident that the theories of Stigler, Posner, Peltzman and Becker are developed by neo-classical economists and thus emerge from a typically reductionist framework. In order to correct some misconceptions and fill the theoretical gaps discussed above, the framework for a comprehensive theory of economic policies for conservation of nature must be broadened to envelope a multidisciplinary approach including economics, politics, environmentalism and culture.

4 An alternative paradigm

4.1 Introduction

"Theory is as indispensable to political analysis as a map or compass is to a traveller crossing unknown terrain. A theory serves to direct one's attention to particular features of the world, thus performing the essential task of distinguishing the significant from the irrelevant" (Brooks, 1989: p41).

The analysis of the Public Choice theory in chapter three has identified several key issues that have been shown to reduce to four main themes. These include the methodological approach; the interests of individuals; the nature of influence and competition; and, and finally, the nature of policy-making and the role of government in policy choice. The four main themes are addressed and integrated into the alternative paradigm below. A definitive summary of an alternative paradigm is offered below and this is followed by a systematic discussion of the constituent elements.

4.2 An alternative paradigm

- i. The methodology adopted in this thesis is best described as a 'soft systems' approach which models real world situations as they exist rather than a hard systems, modelling approach which requires abstraction and restrictive assumptions (MacAdam, 1989). The complexity of political decisions necessitates the adoption of a multi-disciplinary approach that includes economics, politics, environmentalism and culture.
- ii. Private and public interest groups are considered to be the central agents of policy-making in the regulation of land use for nature conservation. Interest group member's are either producers, consumers or individuals with a public interest (moral or altruistic). Interest groups are assumed to use political influence to enhance the well-being of their members or to pursue the attainment of a wider goal (e.g. environmental protection) not just for the benefit of their members but for society as a whole. Therefore, in the present context the motivations of

interest groups are assumed to include economic, political, social, environmental and conservation interests. Furthermore, it is proposed that a competition of interests stimulates political activity that focuses on the present distribution of property rights (benefits streams) within the market for policy. Interests are assumed to be multi-dimensional (as described above), overlapping and continuously competing over an undefined time period.

Becker (1983) assumed that competition among groups is stimulated in the pursuit of efficiency. This neo-classical approach assumes that in the pursuit of micro efficiency the optimal outcome for society will be secured (a Pareto optimal outcome that is by definition a social optimum). However, while interest groups do seek micro (or technical) efficiency to maximise their influence on the political process, (i) it is not assumed to be the prime motivating factor in the competition among groups; and (ii) social efficiency in terms of a Pareto optimum solution is not assumed in the alternative paradigm to be the outcome of competition among groups. Furthermore, within the alternative paradigm social (macro) efficiency is considered in a wider sense and includes allocation and distribution issues

- iii. The influence of pressure groups is assumed in the alternative paradigm to not be fixed and can be expanded by expenditure of time and money on campaigns, political advertising and other ways that exert political pressure. The relative pressure of interest groups creates change. Absolute influence is constrained within the limits determined by prevailing social ideology. Interest groups, and particularly environmental groups, must ensure their members keep up with the group's ideas for continued support. That is, ensure the interests of group leaders are commensurate with members interests. Groups maximise their 'pay-offs' by spending a given amount on political pressure which is determined by the productivity of their expenditures and the behaviour of other groups. There exists a strong network (formal and informal) in the policy community with groups becoming increasingly aware of each other. In his theory Becker (1983) assumes pressure groups to be the only influence on policy-making. However, it is proposed in this thesis that the range of influences includes not only influential pressure groups but also: (i) 'government' in the sense that it may have its own agenda; (ii) policy-makers, including civil servants and ministers who may have their own individual interests that they could represent; (iii) external influences from the EU or international political markets; and finally, (iv) public opinion (generally expressed through the media);

- iv. The outcome of competition then is not an 'optimum equilibrium outcome' as described by Becker (1983) but rather a dis-equilibrium outcome characterised by the satisficing of players' interests. Policy outcome is dependent upon the micro variables of (i) efficiency of groups in producing pressure; (ii) the effect of additional pressure on their influence; (iii) the number of persons in different groups; and, (iv) the dead-weight costs of certain taxes and subsidies associated with given policy solutions. In addition, policy outcome is also dependent upon the macro variables such as the absolute costs of a policy and the economic and political climate. These are, in turn, dependent upon government ideology and how recent the last policy reform was. Competition of interests affect the decision-making process and thus policy-making is perceived to be an iterative and fragmented process.

4.3 An alternative methodology

There are two principle reasons why a mathematical approach, as adopted by Becker (1983) does not contribute to the understanding of government regulation for environmental protection.

The first is the "*misplaced concreteness*" (Daly and Cobb, 1990) that such a model implies and secondly, the complex and interdisciplinary nature of environmental problems, means any abstraction from the real world results in a potentially important unexplored remainder as discussed in chapter three. The advantages of a tightly bound theory, such as, conciseness and simplicity are recognised. However, a more descriptive and comprehensive presentation of the alternative theory precludes important decisions being taken from an abstract model and also facilitates the understanding of a wider audience than just those familiar with mathematics. Therefore, in this thesis the first and most important step is to establish the theoretical construct and test its empirical validity.

The second reason for adopting a descriptive approach is the inherent diversity of environmental issues. The nature of environmental issues are considered to be:

- (i) Multidimensional and multi-disciplinary,
- (ii) non-monetary and monetary,
- (iii) degradation is often irreversible,
- (iv) multisectoral across society or economy,
- (v) problems often extend beyond the actors involved in market transactions. That is, the issues impinge on the interests (such as the property rights) of other parties,
- (vi) there is considerable spatial extension so issues are not necessarily limited to one county or country,
- (vii) there exists uncertainty and risk; and, finally,
- (viii) environmental problems involve conflicts between different interests and ideologies in society. (Soderbaum, 1987)

Many of these broad ranging characteristics are incompatible with the reductionism of Beckers approach to public choice theory. Therefore, assuming environmental issues are inherently complex in nature, the conflict and debate (policy choice) surrounding resolution is also going to be complex. To reduce the debate to two dimensions (producer versus consumer), based on individualistic competition of interests, is over simplistic and unhelpful in attaining a full understanding of the policy-making process.

A soft systems approach is assumed to be a more appropriate tool for analysis of the research questions as defined in chapter two. It is chosen rather than a hard systems approach on the basis of the critique given in Section 3.5. of chapter three which are summarised in the following quote.

"Maths provides a general language which has been widely applied to 'hard' problems. The abstract constructs of calculus and statistics have been found to be useful when the elements of the situation can be assumed to behave in accordance with physical laws. When the elements of a 'soft' problem include such features as conflicting objectives, unclear or complex information flows, people with differing perceptions and attitude, etc. it is difficult to see how a mathematically-based language can be appropriate" (Wilson, 1984).

It is proposed in this thesis that studying the issues of policy-making should start with the whole situation before its reduction to constituent components. As noted above (Soderbaum, 1987) environmental problems are almost always concerned with things

which are interacting with other things. Furthermore, these things and the way in which they interact are under the influence of changeable environmental conditions and evolutionary forces. It is convenient to think of these interrelationships as 'systems of interactions'. This is associated with the fact that totally different situations have the same general characteristics of boundaries, inputs, outputs, transformations processes, and an environment (physical or social). Within this concept of 'systems of interactions' there are two main types of system: (i) those which have clear goals and/or predictable outcomes (purposive or hard 'systems' which include natural systems, designed physical systems and designed abstract systems); and, (ii) those where goals may be unrecognisable and outcomes ambiguous and uncertain (purposeful or 'soft' systems which include human activity systems¹).

The various methodologies and techniques used for analysing sets of issues or problems are therefore contingent upon the nature of the system(s) involved. Given the critique of Beckers 'hard' system in Section 3.5 (chapter three) a 'soft' system dealing with a human activity system is more appropriate in this thesis.

Checklands work began by trying to use systems ideas in ill-defined problem situations. Its outcome is a systems-based methodology for tackling real-world problems, and for exploring social reality. It gives support to the view that social reality is not a 'given' but is a process in which an ever-changing social world is continuously re-created by its members. Taking a systems approach to investigating this research question provides a more useful paradigm for learning about policy-making than a reductionist, discipline based approach.

The soft systems methodology, when regarded as a whole, is defined as a learning system which uses systems ideas to formulate four 'mental acts': perceiving, predicating, comparing and deciding on action. Therefore, the output of the soft systems methodology is very different from the output of hard systems modelling: *"it is learning which leads to a decision to take certain actions, knowing that this will lead not to 'the problem' being 'solved' but to a changed situation and new learning"* (Checkland, 1993).

¹ Human activity systems are less tangible than natural and designed systems although they remain clearly observable in the world. They include at one extreme one man yielding a hammer and at the other, international political systems.

There is a cycle of interaction between the formulation of theory relevant to the set of issues and the testing of that theory by the application of methodology appropriate to the subject matter (in this case a combination of qualitative and quantitative methodologies). From that focus it is possible to formulate two kinds of theory: the first, is substantive theory about the subject matter; and the second is methodological theory about how to investigate the subject matter. The appropriate methodology can be used to test the theory and the results from this test which itself involves action in the real world (for example, observation) will provide what Checkland (1993) calls 'case records'. These are records of happenings under certain conditions. These provide *'the crucial source of criticism which enables better theory to be formulated, better models, techniques and methodology to be developed'* (Checkland, 1993).

There is no theoretical basis for the set of generalised concepts in soft-systems but they are derived from the experience of real-world problem solving and are important aspects of real-world activity. It is important to note that the analyst is not modelling what exists but rather is modelling **a view** of what exists.

Therefore the approach adopted in this thesis is soft-systems which allows a wider economic, social, cultural and political basis for analysis of decisions on economic regulation rather than the narrow base of allocative efficiency of neo-classical economics. Other practical applications of soft systems which offer a detailed account of the methodology are given in Checkland (1993) and MacAdam (1989).

4.4 Interests of individuals and the nature of competition

The neo-classical theory of human motives assumes rent-seeking behaviour by all individuals whether they are entrepreneurs, politicians, bureaucrats, farmers or conservationists. This is useful in terms of hard systems modelling but it fails to recognise the diversity of human behaviour. Humans are complex and can be studied from a number of views. What is proposed in this thesis is that individuals essentially have a dual nature: people are prone to greed and self-interest but they are also motivated at times by a desire to help and co-operate with one another to promote the common good above their own self-interest (Daly and Cobb, 1990). People remain individuals in Smith's traditional sense (Wealth of Nations, 1776) and the individual elements of their behaviour (such as market transactions that generally express the rational self-interest attributed to *Homo economicus* in dominant economic doctrine) are considered to be present. However, *Homo economicus* only covers the individual

as a consumer and neglects the 'other-regarding' behaviour which promotes the public interest. This is commonly found, for example, in those individuals displaying altruistic behaviour such as community work, writing letters for Amnesty International or environmental campaigning. Therefore, assuming individuals have this dual nature (of which the balance between the two aspects will vary between individuals) this can be translated to interest groups. These individual interests are translated from local communities to policy communities by interest groups. The 'mission' of interest groups ranges from those interested in maximising the benefits to their members (for example, trade unions and economic interest groups, such as the NFU) to those groups interested in promoting the common good (Amnesty International, Friends of the Earth, Greenpeace). In between these two types there are groups who are interested in both (for example, the RSPB, WWF).

Some individuals will translate their economic, social or environmental interest into membership of a certain group in order to maximise their utility (which may be dependent upon income or non-monetary benefits such as altruism). Groups therefore compete at a local, national or international level to promote the interest they represent. In this way local, individual interests are translated into influences in political markets.

The fact that regulation for environmental protection exists shows that individuals are not simply consumers bent on satisfying every subjective preference and that they insist on their role as citizens as well (Jacobs, 1991). This role as 'citizen' may be expressed through the membership of an interest group that competes in the political market to advance or consolidate environmental legislation.

It may be argued that 'citizen-type' behaviour towards environmental protection is in fact displaying rational economic behaviour in the traditional sense. It may follow the realisation that current methods of resource exploitation are leading to a situation which in the short to medium term may impact upon society's production possibilities set. While this may be true for some environmental problems such as ozone depletion and the depletion of natural, non-renewable energy sources, the drive for protection of natural habitats in remote geographical areas in the UK must come from behaviour not explained by the concept of *homo economicus*. Many individuals (taxpayers) do not visit Sites of Special Scientific Interest and may even not know they exist. Therefore, not only are the benefits to society as a whole (present and future) not well understood but the necessity of National Nature Reserves and SSSIs for human

survival is even less certain. It is therefore hypothesised in this thesis that human motivations for protection of the natural environment are based upon deriving non-monetary benefits and on altruistic behaviour to protect the interests of future generations. These interests are translated into influence and 'meet' at a policy community where policy decisions are made. The policy decision-making process is shaped by the competition of private and public interests. The competition of interests is best understood by adopting a property rights approach.

"Property... is a benefit (or income) stream and a property right is a claim to a benefit stream that the state will agree to protect through the assignment of duty to others who may covet, or somehow interfere with the, the benefit stream...Property is not an object but rather a social relation that defines the property holder with respect to something of value (the benefit stream) against all others. Thus property is a triadic social relation involving benefit streams, rights holders and duty bearers" (Bromley, 1991:p1).

Therefore, regulation for nature conservation is determined by the conflict over the benefit streams of landowners and farmers (duty bearers) and the benefit streams of the public (rights holders). Traditionally property rights theory advocated that existing property rights reflected a natural order of things for law to help allocate in efficient and equitable ways. (Locke, 1632-1704) While this is appealingly simple, it is more likely to be the case that,

"Property rights result from a congery of statutes, ...precedents, reasonable expectations and social practices that as a whole need serve no one purpose" (Sagoff, 1988).

Hence, without a statutory framework and a well-ordered society there are no property rights. The legal systems determine whether there are any property rights and what they are, for example, rights over land ownership or public access to private land.

Transfer rules are the key rules (legal, administrative and fiscal mechanisms) which define contemporary property rights and play a regulatory and legitimising function associated with statutory land use planning decisions which cover the ownership, exchange and development of landed assets.

It is the benefit streams (from land) and the claims to benefit streams over which conflict in regulation for nature conservation arises. Regulation is the set of transfer rules which protect or alter the benefit streams of duty bearers (landowners and

farmers) and rights holders (the public).

Environmental and conservation groups lobby for a redistribution of rights away from the individual landowner to society (the public) at large. Economists tend to see property rights as factors of production and, therefore, firms can buy or sell property rights just as they can other factors of production. Thus, property rights can be used as policy instruments because they can be altered (through transfer rules) to meet certain desired ends. The choice of transfer rules highlights the debate on market versus non-market processes in the determination of environment policy. A number of individuals would allow the total management of natural resources through markets while others, accepting that markets may work for a number of commodities, feel they may be quite unhelpful in the management of natural resources (Daly and Cobb, 1990; Jacobs, 1991). This is because a pareto optimal outcome which maximises allocative efficiency does not necessarily result in an efficient distribution of resources for society as a whole.

Landowners with full private property rights may choose to follow market trends that result in a lowering of environmental quality and public pressure may rise to such a level (i.e. a change in socio-cultural values) that government has to alter private property rights with some specific public policy.

Conflict arises from the fact that property rights of public-consumption goods (such as beautiful landscapes, natural flora and fauna, clean air) are ill-defined. Status quo property rights indicate landowners and occupiers have private property rights over their land but the fact that natural flora and fauna are public goods indicates that their property rights are characterised by a common resource property rights regime. If the environment (natural flora and fauna) is treated as a common property resource (by individuals who believe they have private property rights over the use of the resource) and if this resource becomes scarce, the property regime has to be changed by introducing scarcity prices or altering the transfer rules. Therefore, property rights can be redefined through the political market.

The redistribution of transfer rules (and hence property rights) is a result of,

"culturally mediated societal redefinition of the countryside with its demand that the transfer rules between sectors be amended...agriculture [is] no longer the unquestioned apex of a rural land-use hierarchy, pressure has emerged for an overhaul of the rural land development process and its transfer rules, as well as efforts to forge new justifications to support and protect particular interests in land" (Marsden et al, 1993:p156).

Regulating land use by designating Sites of Special Scientific Interests directly threatens the landowners benefit stream while, in effect, protecting the benefit stream of the nature conservationist or the public. Some form of compensation has to be calculated in order to maintain the landowners benefit stream and make the public policy implementable. The competition of interests at the national level between environmental and conservation groups, and landowning and agriculture groups largely determines the extent of the redistribution of property rights over public environmental goods, away from land and farming interests towards the public as a whole. The willingness of government to legitimise and protect different property regimes is partly explained by the state's perception of the importance of the individuals holding the different types of property right, that is, their political sway.²

4.5 The role of government

According to public choice theorists, the major policy decisions of government emerge from a set of pressures from competing interest groups in society. This suggests that the conflict over the redistribution of the property rights associated with environmental public goods is solely determined by interest groups, and government simply acts as a mediator. These pressure groups set both the political agenda prior to competition and are a major channel of communication from individuals to government during it which implies interest groups play,

"The role of the proverbial 800 pound gorilla - they go where they want, sit where they want, and they take what they want" (Rausser, 1990).

This is an extremely cynical view of the political process. The government-welfare-maximising paradigm at the other end of the theoretical spectrum, which indicates governments only engage in the improvement of allocative efficiency through collective action, is equally unrealistic. Governments do more than just serve political rent-seekers and the politically powerful or concentrate on maximising social welfare. Actual policy outcomes are likely to be superior to the purely predatory outcome and worse than the purely productive outcome.

²This relates directly in this thesis to the 'exceptionalism' of the agriculture industry in the UK discussed in chapter two.

"An appropriate political economic model is needed to conceptualise the bargains, pacts, compromises and efforts that are undertaken to shape policies acceptable not only to those that have the greatest capacity to obstruct the process but also to others who stand to benefit from the policies" (Rausser, 1990).

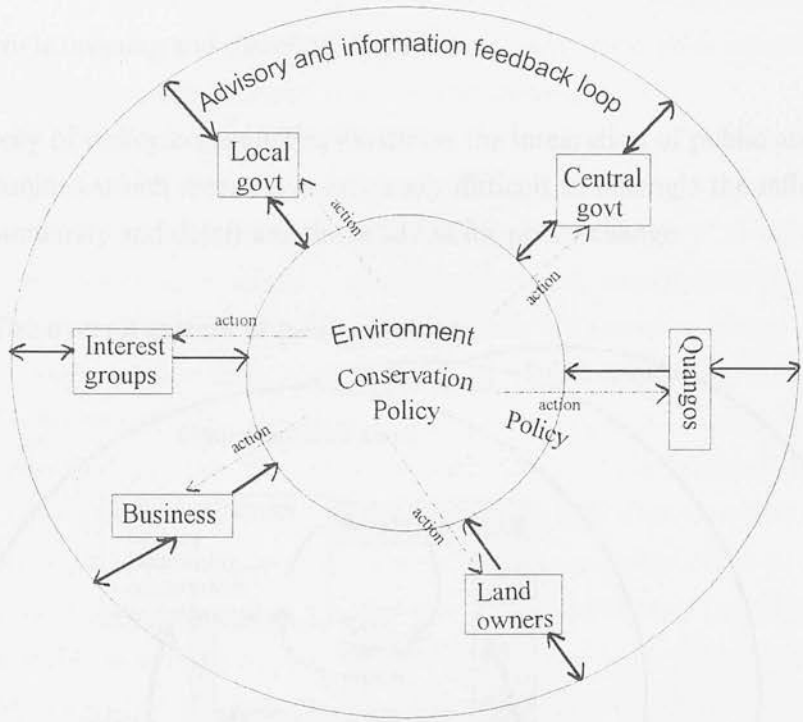
The role of government has classically been seen to intervene in market failure that typically occurs in the supply of public goods such as education, health and the environment. Market failure is a socially non-optimum supply of the public good and government intervention thus seeks to alter the supply of public goods to a socially optimum level. However, it is proposed that government does not just correct market failure but also has its own agenda. The extent to which government has its own agenda varies (across policies, over time and among political parties) and therefore it is impossible to generalise about the role of the state across sectors. Even within environmental policy the UK government has taken a significantly advanced lead over other EU member states in legislation on animal rights and nature conservation but it has been slower on pollution matters (Weale, 1992).

Some policy decisions may reflect neither pressure groups' activities on the state nor the pursuit of public interest by the government. The 'broker state' in pluralist theory interprets public policy as the aggregation of pressure groups' activities going on inside and outside the state apparatus (Dunleavy and O'Leary, 1987). There is no reason why the competition of interests should remain only within the domain of the private market and it is more realistic to extend this competition to the public sector as well. State officials and state agencies as well as the elected officials have their own altruistic and non-altruistic preferences, and policy is as much the outcome of self-interested contests within the state apparatus as it is of contests outside. A broker state does not neutrally follow public interest or '*mirror society*' and that *"whatever steering capacity it possesses is a product of the strength of the dominant coalitions inside and outside the state"* (Dunleavy and O'Leary, 1987).

"[A Broker state] consists of multiple formal and informal pressure group activities, of coalitions and bargains struck, and extends into the interactions which take place amidst the equally multiple activities, coalitions and bargains amongst non-state pressure groups.....The boundaries between public and private sectors disappear in a haze of fringe organisations and quasi-government agencies" (Dunleavy and O'Leary, 1987:p48).

This public-private interaction and multi-dimensional nature of interests is illustrated in Figure 4.1.

Figure 4.1 Multi-dimensional interests



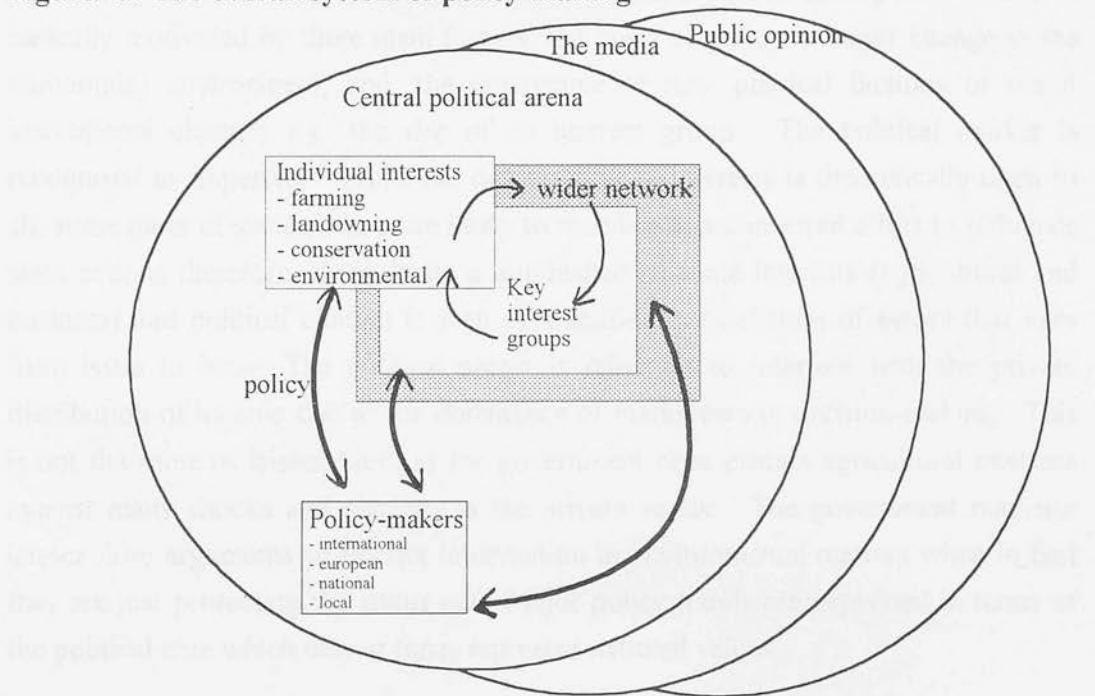
The large, outer circle represents a flow of information which is the advice or feedback loop which includes contacts, phonecalls, letters, reports etc. Each individual agent or player has a two-way flow between themselves and the advice/feedback loop. This flow of information is what influences government to develop policies, which are represented by the inner circle. Each agent attempts to influence development of policy to meet their own interest. Local and central government have a two-way arrow indicating an iterative relation between decision-making and policy development. Policy goes into all actors, including quangos, landowners, interest groups and business. All the actors impact policy in some way and abide, to a certain extent, by policy. The broken lines represent the action which all agents have to take to meet policy requirements.

The key points to note are that:

- (i) all actors are also action groups;
- (ii) because the actors in the policy community are also action groups all interests (public and private) including local and central government are interconnected;
- (iii) the 'supply side' of the political market (that is, local and central government) is active in policy decisions.
- (iv) the system is ongoing and therefore dynamic;

This complexity of policy communities illustrates the integration of public and private policy communities which means it is extremely difficult to untangle the influences in the policy community and determine the catalysts for policy change.

Figure 4.2 The overall system of policy-making



The overall policy-making system is characterised by Figure 4.3 which illustrates the three main arenas of influence 1. the central political arena; 2. the media; and, 3. public opinion. It is assumed that the basis for interaction or competition among different agents is the redistribution of property rights.

4.6 The overall system

The three large circles in Figure 4.2 represent three layers of interconnected activity. In the core there are key pressure groups which form a system of 'interest' representation. Individual interests (such as farming, landowning and conservation) are collectively represented by their respective interest groups which subsequently make representations to policy-makers and hence influence policy. Interest groups may direct their representations at all levels of policy-making (local, national, european or international) although many concentrate on one level. There is also a system of direct representation between policy-makers and individual interest as it is assumed policy-makers are made up of individuals with their own interests and a number of key individuals are influential in decision-making.

The most likely point for initiation of policy reform is the interest group who are generally proactive in seeking to maximise the benefits (political rents) to their members or to society as a whole. Environmental and conservation groups are particularly characterised as being proactive. Nature conservation policy reform is basically motivated by three main factors: the costs of policy; a major change in the (economic) environment; and, the emergence of new political factions or major institutional changes e.g. the rise of an interest group. The political market is recognised as imperfect. While the organisation of interests is theoretically open to all, some parts of society are more likely to mobilise in a concerted effort to influence state actions therefore, there exists a dominance of some interests (agricultural and business) and political conflict is seen as a shifting constellation of actors that vary from issue to issue. The political sector is reluctant to interfere with the private distribution of income due to the dominance of marketeers in decision-making. This is not the same as *laissez-faire*, as the government does protect agricultural interests against many shocks and changes in the private sector. The government may use *laissez faire* arguments to restrict intervention in environmental matters when in fact they are just protecting the status quo. Major policy trends are explained in terms of the political elite which may at times represent national values.

The chief watchdogs guarding the general 'public interest' against governments are thought to be the news media (Bagehot, 1992). The national and local newspapers play an important role in the mechanism by which environmental problems come into the public attention and subsequently mobilise public opinion. The interaction and influence of the media and public opinion are complex and dynamic variables which

often escape observation and Dunleavy and O'Leary (1987) points out that the combination of a free press, increasing journalistic professionalism and countervailing powers in the media creates a system which generates the information necessary for translation of public opinion into an effective influence on policy-makers and politicians.

The media is considered to be a background and a focal expression for public opinion with continual information flows. The media reflects cultural change over a longer period of time and contributes more directly in a day to day comment or report on events. Therefore the media is part of an influential backdrop and is considered to be one of the actors on the political stage. The two roles are complementary. Illustrating the system with three overlapping circles represents the integrated nature of those within the central political arena and those influencing it from the outside (the media and public opinion).

5

Methodology

Chapter five is divided into two parts, research aims and objectives, and methodology.

5.1 Research aims and objectives

There are four main themes in the alternative paradigm which are: (i) methodological; (ii) interests of individuals and translation of these interests into influence; (iii) the nature of influence and competition; and, (iv) the nature of policy-making and the role of government.

As described in Chapter Four, a 'soft systems' approach has been adopted in this thesis. This involves describing real world situations as they exist rather than abstracting from them. This method underpins the whole approach adopted in the research and its contribution to meeting the aims of the thesis are discussed in the conclusions in Chapter Seven.

The remaining three themes are interlinked and were simultaneously researched through a comprehensive survey which consisted of three questionnaires developed for the following target populations: 'farmer/landowner'; 'local organisations'; and, 'policy-maker'.

The overall aim of the surveys was to explore the above three main themes through the implementation of SSSI regulation in Orkney and the 1990 policy reform. The Orkney Islands were chosen as the area of study for three principal reasons. The first is that it is important to illustrate how influence functions are generated from the competition among interests for the (re)distribution of property rights at the local community level which then filters up through the political process to the national policy-making level and the resulting determination of policy. The second reason, related to the first, is that Orkney is a suitably remote (politically and geographically) area to demonstrate the linkages between local and national policy arenas. Orkney is also generally perceived to be remote from the locus of support for the environmental and conservation movements. The linkages and potential conflict between local

farming communities and national support for conservation interests could thus be examined. Finally, the choice of Orkney enabled the proposition to be explored that individuals do not necessarily pursue single objective interests. Farming in Orkney is perceived as a way of life and less oriented towards agri-business than areas such as, for example, East Anglia.¹

In addition to the above rationale for the choice of Orkney as a study area, Orkney was the focus of a great deal of SSSI controversy in the early 1980s which polarised the agriculture/conservation debate, they are an easily defined geographical unit and the researcher has considerable first hand knowledge of the islands and farming community.

The three main research themes are broken down in the following discussion into objectives for the surveys.

1. To determine the interests of individuals and the translation of their interests to policy arenas.

The interests of individuals and the translation of their interests is explored primarily through the farmer questionnaire. This was done through a three pronged approach. The first two approaches were indirect deriving farmer interests from:

- (i) their attitudes to SSSIs; and,
- (ii) their future nature conservation policy preferences.

The third was a direct method deriving interests from:

- (iii) farmers expressed farming objectives and membership of interest groups.

¹ It would be interesting to conduct a comparative study with, for example, East Anglian farmers who are considered to be more business oriented and therefore perhaps less multi-objective in their interests.

These are described in more detail below.

- i. The principle issues arising from the designation of SSSIs in Orkney were covered in the local newspaper during 1983 and 1984. A list of the titles of articles is given in Appendix I. These issues generally fell into three broad groups: economic; property rights; and socio-political. This framework served two purposes: the first was to illustrate the principle issues relevant to individual farmers interests in land use; and, the second provided an opportunity to measure for any change in attitudes over the ten year period.
- ii. The second approach to determining individual farmers interests was to establish what farmers preferences were with respect to future nature conservation policy options.
- iii. The third approach was direct and sought to determine individual farmer interests from their expressed farming objectives and membership of interest groups.

Two main types of comparison were made: between early media coverage and survey results for a general impression of any changes in attitudes; and, between SSSI and Non-SSSI respondents to determine whether or not SSSIs had an impact on attitudes. These results were also cross referenced with results from more general questions in order to achieve a profile of farmer interests in Orkney.

One of the main propositions of this thesis is that it is the competition between agriculture and conservation groups which determines national UK policy for nature conservation. As a geographically and politically remote area it was important to understand how farming interests in Orkney were represented in policy arenas. In support of this, it was necessary to determine how interest groups kept in touch with their members and what members perceptions were of the role and effectiveness of their interest groups in representing their interests. From these areas of research it was possible to establish to what degree farming interest groups were representative of their interests.

2. The second objective was to illustrate the networks, influence and competition among players in policy arenas. This objective broadened the analysis out from the focus on individual interests and used results from all three questionnaires to build on the concept of the translation of interests into policy arenas through networks based on information exchange. Information is assumed to be a resource which contributes to a groups influence and therefore the concept of information networks was explored in order to identify which groups had influence and which groups were key groups. Respondents of all questionnaires were asked which organisations they relied upon in order to conduct their business. What made a group a 'key' group was explored and thus the determinants of a group's influence were identified. Income and membership data of key interest groups were also collated independently from the three surveys as supporting evidence of their influence. The perception of a small number of key groups with influence leads into the final concept of competition of interests as the main policy determinant. Policy-maker respondents were asked about their perceptions of groups' roles with respect to their members and what they considered the balance of power to be between competing interests.

3. To identify the nature of policy-making and the role of government. The principle objectives were to determine whether policy-making is driven by the competition of the most influential interest groups; to map out the competition of interests and explore the concept that competition over policy is an attempt to maintain or redistribute property rights; to determine important external influences on policy-making; to determine the nature of policy-making (fragmented, iterative); and, finally to understand the outcome of policy.

These objectives were met through an appraisal of the 1990 reform of the NCC which involved direct questioning of key policy-makers. By examining the reform in detail, the debate and negotiation over the regulation and the role of government was identified. This case of reform was chosen because it is the most recent reform in nature conservation policy and therefore reflects current trends in influence and ideology.

5.2 The methodology

5.2.1 The Sample

Three questionnaires were developed to enable primary research on the three target populations described below. The subject areas of each of the questionnaires were dovetailed as shown in Table 5.1.

Table 5.1 Farmer, local organisation and policy-maker questionnaires

Farmer (71 questions)	Local organisation (59 questions)	Policy-maker (33 questions)
Information sources		
Nature conservation policy-making		
		Interest groups relations with government
Wider nature conservation issues		
		Nature conservation policy reform
Involvement of Orkney Islands Council in farming and conservation		
Balance of power between conservation and agriculture interests		
Role of pressure groups		
	Contact with local community; contact with head office.	
Perceived impact of and attitudes towards SSSIs.		
Socio-economic profile of respondents		

The three questionnaires were based on a set of core questions shown in Table 5.1 to span across all three target populations. The set of core questions was supplemented by additional questions which allowed specific issues to be pursued relevant to the particular population being surveyed, such as, the socio-economic profile of farmer respondents and contact with the local community and contact with head office for local organisations. The use of 'core' and 'supplementary' questions allows a degree of flexibility while maintaining the integration of subject matter being researched. The 'policy-maker' questionnaire was shorter than the 'farmer/landowner' as shown in Table 5.1 because (i) the policy-maker respondents were assumed to be more familiar with the subject area and therefore fewer, but more concise questions could be asked, and (ii) their time constraints meant that shorter interviews were preferable. All interviews were conducted face-to-face.

The three populations are defined by their geographical, demographic and institutional boundaries.

Farmer sample

The target population in this survey was taken from the 536 full-time farmers in Orkney. The individual making the majority of decisions on the farm was selected as the respondent and in every instance was available. It was thought that this individual was the most likely to be the best informed and aware of local and policy issues.

From the population of 536 full time agriculture holdings in Orkney, 80 respondents were drawn, based on a two-stage stratification (Moser and Kalton, 1986)². The total sample of 80 farmers was allocated between the strata by proportionate allocation and subsequently randomly sampled within the second strata.³

² Only full-time farmers were included in the farmer sample. This is based on the fact that the farming population in Orkney principally involves full-time farmers and the proportion of part-time or crofting holdings is negligible, and considerably lower than that in the Highlands or Western Isles of Scotland.

³ Total variation (for any particular variable or attribute) in a population is composed of two elements: variation between strata and within strata. For example, among 536 holdings, those with SSSIs will have different views from those without; and there will also be variation of opinion within each special group. In stratified sampling, variation between strata does not enter into the Standard Error because one ensures that this component of variation in the population is exactly reflected in the sample. There is no 'chance' about it. Sampling, and therefore the occurrence of chance, only takes place within strata. Consequently, since only the variation within strata enters into the standard error, the greater the proportion of the total variation, the greater will be the gain due to stratification.

The first stage divided the islands into SSSI and non-SSSI areas shown in Table 5.2. The second stage of the stratification was by location within the SSSI and non-SSSI strata. This ensured an even geographical distribution of respondents across the islands which is illustrated Figure 5.1.

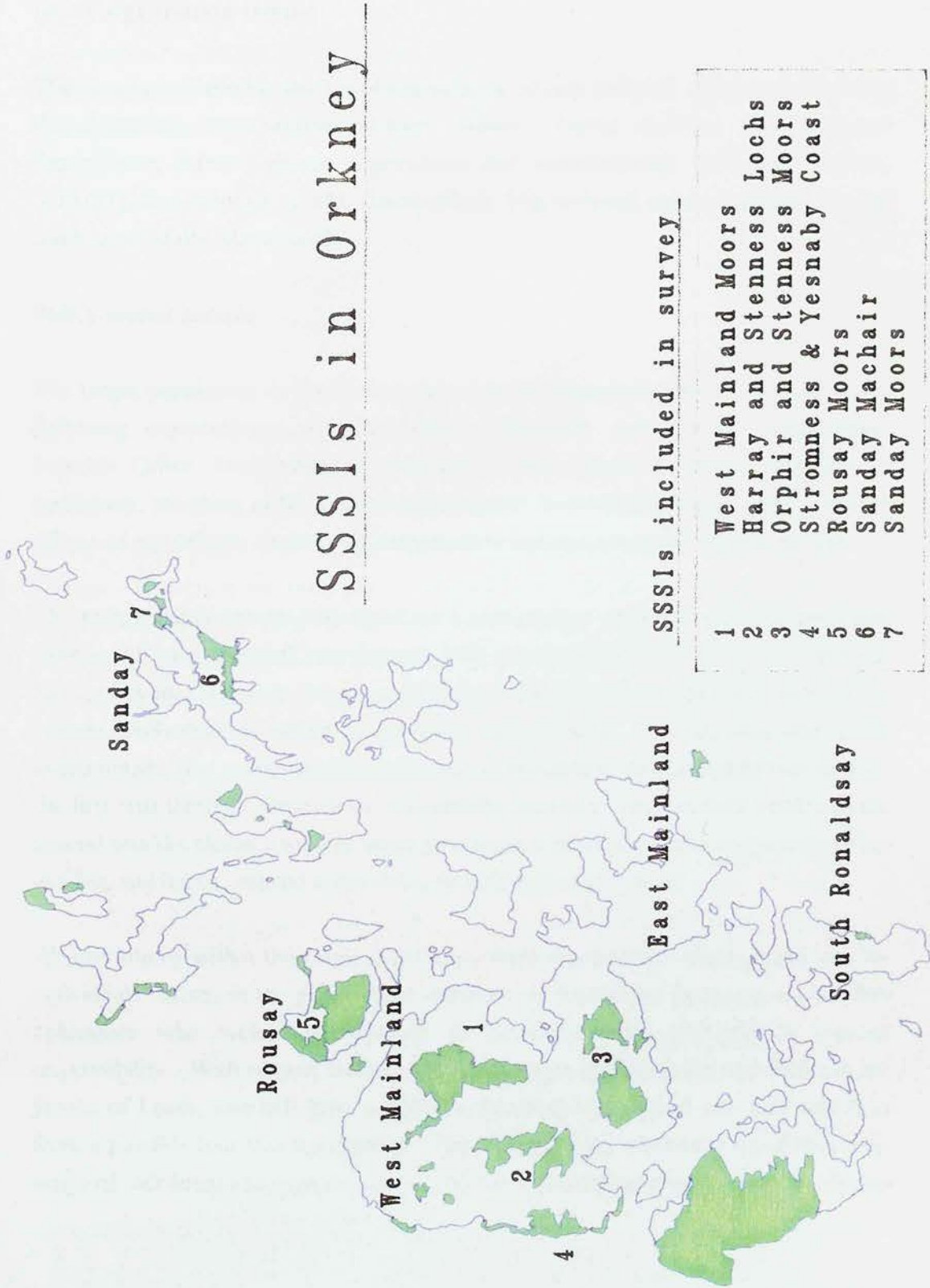
Table 5.2 Two-stage stratification of the farmer sample

First stage stratification			
SSSIs		Non-SSSIs	
Second stage stratification			
14. West Mainland Moors	7	West Mainland	16
2. Harray and Stenness Lochs	3	East Mainland	10
3. Orphir and Stenness	10	South Ronaldsay	6
4. Stromness and Yesnaby	8		
5. Rousay	7	Rousay	6
6. Sanday Machair	3		
7. Sanday Moors	2	Sanday	2
Total	40	Total	40

This distribution was necessary because the SSSIs were designated over approximately a ten year period and there were changes in NCC/SNH staff administering the sites. These changes are considered to have had an influence on respondents attitudes. The distribution also accommodates the physical, spatial and temporal variation across SSSIs. A map of the SSSIs in Orkney is on the following page (Figure 5.1).

⁴ The number beside the name of the SSSI relates to the key in Figure 5.1.

Figure 5.1 SSSIs in Orkney



The farmer survey was conducted by the author and an assistant in a 43:37 split during January and February of 1993. From the sample of 536 farmers, 91 were contacted to generate 80 successful responses.

Local organisation sample

The target population in the 'Local organisation' survey included representatives from the following organisations: Orkney Islands Council planning and economic departments; interest groups (agriculture and conservation); SNH (area office); SOAFD (local office); and SAC (local office). This included eight respondents and all were successfully interviewed.

Policy-maker sample

The target population in the 'Policy-maker' survey included representatives from the following organisations: Scottish Office Agriculture and Fisheries Department; Scottish Office Environment Departments; SNH (head quarters); members of parliament; members of the European parliament; peers of the House of Lords; head offices of agriculture, landowning conservation and environmental interest groups.

The policy-maker sample was based on a non-random sample in the UK generated from an informal round of interviews in 1991 which identified 25 key 'policy-makers'. Key 'policy-makers' were chosen according to their previous experience and/or their current involvement in nature conservation policy-making. The response rate to this questionnaire was more variable which was considered to be a result of two factors: the first was the high demands on respondents time as a result of their work and the second was the closed nature of some government institutions with respect to policy-making, and hence reduced accessibility to potential respondents.

All institutions within the target population were represented, although the specific individuals chosen in the government departments passed the interview on to other colleagues who were also involved in decision-making but with a reduced responsibility. With respect to the chosen Members of Parliament and Peers in the House of Lords, one MP from a possible two was interviewed and only one Peer from a possible four was interviewed. The 21 interviews conducted included a wide range of individual and organisation perspectives and that interviews were conducted

in sufficient depth that the omission of 4 potential respondents was not considered to result in any bias.

5.2.2 Questionnaire design

A structured questionnaire was chosen to be the most useful way to generate the relevant information from the farmer population and local organisations necessary to address the research problem described above.

A combination of open-ended, multiple choice and dichotomous response formats was used in order to provide variation in what proved to be a lengthy interview and also to meet differing objectives for different questions. A discussion of the questionnaire design is included in Appendix II.

The farmer questionnaire, local organisation questionnaire and agenda for policy-maker interviews are included in Appendix III.

A pilot study was carried out on 8 East Lothian farmers in January 1993 before the survey was commenced in Orkney. This constituted a sample of 10% of the Orkney farmers. While it was recognised that many differences exist between Orkney and East Lothian farmers in terms of farm type, size and issues relevant to their farm businesses the designation of SSSIs is a national policy and is relevant to all farmers. The purpose of the pilot survey was to ensure the clarity of the questionnaire and its structure and flow and that the questions targeted the research problem. Following the pilot study, several minor changes were made to existing questions. One of the areas of particular interest in the research was the perceptions of equity associated with the system of designating and administering SSSIs and the pilot showed this area had not been fully addressed. In order to meet this requirement a number of questions were subsequently added. Both the 'local organisation' and 'policy-maker' questionnaires were piloted 'in-house' at the Scottish Agriculture College and Edinburgh University's Institute of Ecology and Resource Management. Pilot-respondents were chosen with respect to their knowledge and experience in nature conservation and land use policy and each questionnaire was amended accordingly following their comments.

The farmer questionnaire included closed and structured questions and therefore generated more formal data than the local organisation and policy-maker

questionnaires. These included more open questions and therefore generated more 'soft' data. This has been accounted for in the data analysis in Chapter Six.

5.2.3 Questionnaire bias

In the analysis of the results there are three possible sources of bias which must be kept in mind:

(i) The Shetland Oil Spill

During the first week of January 1993 the Braer oil tanker ran aground off Shetland. Extensive media coverage of this continued during the survey in Orkney and served to polarise respondents scepticism towards environmentalists. Discussion with respondents revealed feelings of cynicism on two counts. The first was towards environmentalists who were perceived to be overreacting to a 'disaster' which was seen by many respondents as not being of any consequence. The second element of revealed cynicism was towards local Shetland farmers and Shetland fish farmers 'bandwagoning' for government money to save any potential loss in income associated with the oil spill.

It is thought, for example, that responses to question 27, *"How important do you think television and newspapers are in influencing policy-makers?"* may have been positively distorted. In addition to this, scepticism may also have served to distort how open respondents were about their own conservation-mindedness, perceiving it to be a negative aspect at that time.

(ii) Respondent bias

The ability of some respondents to provide an accurate answer may have been a significant area of concern in the farmer questionnaire for two reasons. The first was that some respondents admitted they had never considered several of the questions before and secondly, they were unaccustomed to voicing their opinions. Any bias this may have created is thought to have been overcome by (a) the size of the sample and (b) the large numbers of questions in the survey which allows cross referencing of answers for consistency and also gave the respondent time to relax and think about the subject area.

(iii) Interviewer bias

Interviewer bias is an important factor to take into account in questionnaires. The farmer questionnaire was carried out by two interviewers both of whom had previous experience in farmer interviewing and who shared local geographical and conservation policy knowledge. The distribution of SSSI and non-SSSI respondents between interviewers is illustrated in the following figure.

Table 5.3 Distribution of SSSI and non-SSSI respondents between interviewers

Interviewer	Respondent with SSSI	Respondent without SSSI	Total
Author	21 (52.5%)	22 (55%)	43
Assistant	19 (47.5)	18 (45%)	37
Total	40	40	80

Interviewer bias was controlled for by ensuring that there was a relatively equal distribution of interviews of SSSI and non-SSSI respondents between the two interviewers. As a result, the 80 interviews are considered to contain no interviewer bias. Furthermore, interviewers collaborated closely during the survey period and it is assumed no significant differences in interview technique occurred. Interviewer bias is irrelevant in the local organisation and policy-maker surveys as they were all conducted by the same interviewer.

In the Local organisation and Policy-maker questionnaires analyst bias is the only source of bias which may arise. This could arise as a result of the analysts subjective interpretation of results. This is unavoidable in qualitative data processing but can be minimised by extensive interviewing and careful data analysis.

5.2.4 Data processing and methods of analysis

Farmer survey

Due to the large database generated by the 'farmer' survey, statistical analysis of many of the responses was possible. This was complemented with a non-statistical analysis of the qualitative aspects of the data. Coding dictionaries were compiled for each 'farmer' questionnaire and data were entered into an Excel spreadsheet database.

There are three main types of analysis on the farmer questionnaire data:

- (i) Comparison of SSSI respondent with non-SSSI respondents (to identify whether or not the designation had an impact on the attitudes of the respondent);
- (ii) Analysis of the data set as a whole to investigate all respondents interests;
- (iii) Cross-tabulation, of respondents answers to two questions. This was aimed at respondents as a whole, irrespective of their designation status and could allow for checking consistency of answers.

The Chi-Squared (χ^2) Test was used because of its power in testing the association between two data sets (namely farmers with SSSIs and farmers without SSSIs). A full description of the Chi squared Test is included in Appendix IV.

Relative differences (as well as statistical differences) are commonly accepted methods of data analysis as they can give an indication of relationships between variables (Burgess, 1991). This is used in all three sets of data.

Local organisation and policy-maker surveys

The data from the local organisation and policy-maker surveys was collected and recorded systematically according to question number. A data base was compiled and from this analysis was undertaken.

Statistical analysis was unsuitable for the 'local organisation' and 'policy-makers' surveys due to the mainly qualitative nature of the data and relatively small sample sizes. Although there are 21 respondents of the Policy-maker survey not all of them answered all of the questions. This is a result of the open nature of many of the questions and it was not always possible to cover all the questions if the interview discussion proceeded in a different direction. Therefore, analysis of the qualitative data included in all three questionnaires is based on a subjective appraisal of the results and uses previous knowledge and researching skills (Mitchell, 1983).

Analysis of the data from all three surveys has been made on two levels: statistical and qualitative. Throughout the discussion of the results in the following chapter both methods of analysis are drawn together in a complementary role in order to explore the research objectives outlined above.

6 Results

Chapter Six describes and discusses the major results of the surveys outlined in Chapter Five. Therefore, three main parts to Chapter Six include:

- (i) the interests of individual farmers;
- (ii) networks, influence and competition; and,
- (iii) the nature of policy-making and the role of government.

For clarity, each set of results are accordingly referenced with respect to the target population: farmer, local organisation or policy-maker. Quotes used from the latter two questionnaires are anonymous as agreed during interviews.

Part 1 The interests of individuals

The discussion of part one of Chapter Six focuses on the results of the farmer questionnaire. The general issues which arose from the designation of SSSIs in 1983 and 1984 are presented below. These serve to highlight the fears and reservations of many Orkney farmers, landowners, representatives of the NFUS and the local council and community councils about the NCC and the process of designations. They also provide a benchmark against which to explore more recent attitudes may be explored following the passage of time. Next farmer respondents' perceptions of the physical and economic impact of SSSIs are discussed, followed by discussion of their attitudes towards more general conservation and policy issues. Finally, the results of questions concerning farmer respondents' membership of interest groups and the translation of farmers' local interests to national decision-makers are presented.

6.1 General local issues arising from the designation of SSSIs

Section 6.1 covers the issues addressed by articles and letters, published in the '*Orcadian*', the local weekly newspaper in Orkney, which reported extensively on the conflict during 1983 and 1984.

These issues were indicative of the concerns of farmers at that time with respect to SSSI designations and have been used as a framework for the farmer questionnaire outlined in Chapter Five. The issues divide into the following three broad categories: economic, property rights and socio-political.

Economic concerns arising from SSSI designation

- A fall in land values resulting from '*designation blight*'.
- The erosion of the local economy arising from a contraction in economic activity (for example, reduced demand for labour or agricultural inputs).
- The development of a two-tier system of compensation with large payments to prosperous farmers and smaller payments to farmers less well organised or placed to negotiate with government agencies.

Property rights concerns

- The infringement of private property rights.
- Adherence to the system was not perceived to be as voluntary as the NCC was advocating.

Socio-political concerns

- The NCC was seen to be a non-elected and unaccountable body with no appeals procedure which led locals to anticipate absentee control by people who knew little or nothing about the locality.
- Perception of the priority of birds over people.
- Locals felt ill-informed about the system of designations.

The above briefly summarises the principle concerns expressed by farmers and local communities at the beginning of the 1980s.

The results presented in the rest of this Chapter are obtained from the responses to the survey questionnaires described in Chapter Five and carried out during January and February, 1993.

6.1.1 Farmer respondent attitudes to the system of SSSIs.

Farmer respondents' were asked a number of introductory questions about the general issues surrounding SSSI designation in order to introduce the subject area and put the respondent at ease. Following this, they were specifically asked, *'What would you say, if any, are the main shortcomings of the SSSI policy?'*

The main shortcomings of SSSIs by farmer respondents are presented in Table 6.1 below.

Table 6.1 Main shortcomings of SSSIs: farmer respondents (n=80)

Response	SSSI	no-SSSI	Total
1. NCC laid down the law; not flexible enough; loss of control;	18	7	25
2. Personality clashes; lack of understanding; lack of communication;	6	7	13
3. Not enough money; no money in the long run;	1	4	5
4. Not enough management of sites; left to nature too much;	2	-	2
5. Too preservationist	1	-	1
6. Unnecessary	1	-	1
7. Abuse of the system	1	-	1
8. Cost of the system is too high	-	1	1
9. Regulation should be stronger	1	-	1
10. Not enough SSSIs	-	1	1
11. Total comments	31	20	51
12. Don't know	9	20	29
Total responses	40	40	80

Many more respondents with SSSIs commented than those without SSSIs. The first three responses were the most widely supported. These concerns correspond closely to those expressed through the local media during 1983/84 as outlined in section 6.1 above.

The following quotations serve to illustrate the main criticisms of the designation of SSSIs in Orkney:

"What the farmer needed to be compensated for the most was the loss in control"
(Non-SSSI respondent).

"Red tape, steamroller attitude and too much power" (SSSI respondent).

"The money won't be there in the long-run and money is needed to 'keep the peace'"
(Non-SSSI respondent).

Responses 4 and 5 criticise the local management of SSSIs; responses 6, 7 and 8 are critical of the system as a whole; and the final two responses are positive about the system of SSSIs and promote their extension.

Of a total of 51 responses 43 were in the first three categories. The relative importance of these concerns to the respondents is in line with those expressed previously. That is, criticisms have remained in the same three themes as ten years before.

Following on from the main criticisms, respondents were asked what changes they would like to see to the system of SSSIs in Orkney. Table 6.2 below presents the results of this question.

Table 6.2 Changes desired to SSSIs by farmer respondents (n=80)

Changes desired	SSSI	no-SSSI	Total
1. More money	5	2	7
2. More flexibility	4	3	7
3. More co-operation/communication by SNH (NCC)	1	6	7
4. Practical management	4	2	6
5. Money available to all farms	1	2	3
6. Stop abuse of the system	1	1	2
7. Less staff turnover	1	-	1
8. Fairer compensation	1	-	1
9. Get rid of them	1	-	1
10. Take less time	-	1	1
11. Policed more and penalties for violation	-	1	1
Total changes	19	18	37
12. Don't know	21	22	33
Total	40	40	80

The most common changes to the SSSI system desired by farming respondents were '*more money*' (i.e. increased compensation to farmers), '*more flexibility*' and '*more local communication and co-operation*'. 4 respondents said they particularly wanted to see positive practical management of heaths and moorlands where they considered the heather to be becoming overgrown and 3 respondents wanted to see positive management plans for farmers which would be available to all farms and not just those with SSSI designations (Table 6.2).

6.1.2 Summary of main results in Section 6.1

The above responses have indicated that the principle area of dissatisfaction amongst farmer respondents lay in the loss of control associated with SSSI designations. This was followed by management issues of consultation and co-operation, and finally, concerns over the level and future of compensation payments. The main difference between SSSI and non-SSSI respondents was that SSSI respondents gave more comments and these were more focused on property rights issues. Non-SSSI respondents responses were evenly split between property rights and socio-political (local management) issues.

6.2 Economic issues

Eight questions related to farmer respondents' perceptions of the economic impact of SSSI designations were asked in order to explore the extent to which the economic concerns expressed 10 years ago remained. These questions included the perceived impact of SSSI designation on income, stocking levels, off-site impacts and land values. The extent to which the system of payments was seen to be equitable was addressed with questions relating to the method of compensation and variation in compensation payments.

6.2.1 Farmer perception of impact of SSSI designation on farm income

Farmer respondents were asked if SSSI designation had or (in the case of non-SSSI respondents) would affect their farm income.

Table 6.3 Farmer perception of impact of SSSI designation on farm income

Response	Respondent		Total
	SSSI	No SSSI	
Effect	15 (20.69)	18 (12.31)	33
No effect	22 (16.31)	4 (9.69)	26
Total	37	22	59

N=80; 21 'Don't know' responses; $\chi^2_{05} = 9.52$ with 1 d.f.; $p < 0.01$.

χ^2_{05} is statistically significant at the 1% level with 1 degree of freedom which indicates that farmer respondents perception of income is related to whether or not they had an SSSI designation on their land.

The majority of respondents with SSSI designations (22/40) perceived their income to have remained constant. 15/37 respondents felt their income had been affected, of which 12 perceived an overall increase.

There was a significant difference in perceptions between those respondents with SSSIs and those without. That is, following their 'hands-on' experience, those respondents with SSSIs were less likely to perceive an impact on their income following a designation. Table 6.2 illustrates this relationship which has been tested for independence between the two groups using the Chi-squared (χ^2) test, when $p < 0.05$. (This is illustrated as χ^2_{05} .)

$\chi^2_{.05} = 9.537$ and is therefore significant. Respondents with SSSI designation were statistically less likely to perceive an impact on their farm income than respondents without SSSIs. (For a full description of the Chi-squared test of independence please refer to Appendix IV).

6.2.2 Farmer perception of impact of SSSI designation on stocking levels

Table 6.4 Farmer perception of impact of SSSI designation on stocking levels

Response	Respondent		Total
	SSSI	No SSSI	
Impact	14 (19.58)	20 (14.32)	34
No impact	24 (18.42)	8 (13.58)	32
Total	38	28	66

N = 80; 14 'Don't know' responses; $\chi^2_{.05} = 7.721$ 1 d.f.; $p < 0.01$

Farmer respondents were asked if they believed their stocking levels had been or would be affected by an SSSI designation. 24 of those with sites reported no change in stocking levels. This compares with one half (20/40) of those without sites who thought there would be an impact. The difference between SSSI and non-SSSI respondents was significant at the 1% level which indicates a strong association between SSSI designation and perceptions of the impacts of a designation on stocking levels. That is, a non-SSSI respondent was significantly more likely to anticipate a reduction in stocking levels than a respondent with an SSSI.

6.2.3 Farmer perception of impact of SSSI designation off-site

Table 6.5 Farmer perception of impact of SSSI designation off-site

Response	Respondent		Total
	SSSI	No SSSI	
Impact	9 (13.25)	15 (10.75)	24
No impact	28 (23.75)	15 (19.25)	43
Total	37	30	67

N = 80; 11 'Don't know' responses; 2 'No response'; $\chi^2_{.05} = 4.751$, 1 d.f.; $p < 0.05$.

Farmer respondents were asked if they thought the designation of an SSSI would affect or had affected farming practices on the rest of the farm. Over one half of all (SSSI and non-SSSI) respondents thought there had been no change and 24/80 of all farmer respondents thought owners of sites would have intensified activities on the farm off-site. The majority of respondents (43/80) reported that they did not perceive SSSIs to lead to an intensification of farmer activities on the rest of the farm.

Substantially more farmer respondents without SSSIs answered 'Don't know' (8/10 'Don't know' responses) which reflects their higher degree of uncertainty not having had first hand contact with SSSI designations.

The above results suggest that SSSI designations are not generally perceived to lead to farm intensification. This is supported from the results of the other two questionnaires.

6.2.4 Farmer perception of impact of SSSI designation on land values

Following concerns in the early 1980s of 'designation blight', farmer respondents were asked if they perceived a change in land values following an SSSI designation.

26 out of 80 farmer respondents believed land values to have changed through SSSI designation and of these over one half (17/26) expected a decrease in value. 35/80 respondents considered there was no change and the remainder (19/80) responded 'Don't know'. $\chi^2_{.05} = 0.008$ with 2 d.f. which indicated that there was no significant difference in responses between SSSI and non-SSSI respondents.

6.2.5 Farmer perception of the equity of the SSSI system

In order to examine the concerns expressed in the early 1980s of a two tier system developing, farmer respondents were asked for their perceptions about the general fairness of the system of SSSI designation. They were then asked more specifically about the perceived variation in compensation payments over the last ten year period.

Table 6.6 Farmer perception of the equity of the SSSI system

Respondent			
Response	SSSI	No SSSI	Total
Fair	19 (15.52)	10 (13.48)	29
Not fair	11 (9.10)	6 (7.90)	17
Don't know	8 (13.38)	17 (11.62)	25
Total	38	33	71

N = 80; 9 no response; $\chi^2_{.05} = 7.187$; 2 d.f.; $p < 0.025$.

Farmer respondents were asked how fair they perceived the system of SSSIs to be. The system was perceived to be 'Fair' by 29/80, 'Not fair' by 17/80 and 25/80 responded 'Don't know'.

The ChiSquared test indicates a relationship between respondents' perception of fairness and whether or not they had a designation. Table 6.5 shows that respondents without an SSSI were significantly less likely or able to comment on their perception of fairness in the SSSI system. However of those respondents' who did express a view (43) a small majority suggested the system was fair (29/43).

6.2.6 Farmer perception of the variation in compensation payments

All farmer respondents were asked if they perceived any variation in compensation payments. Payments were perceived to vary by 35/80 of farming respondents, with 4/80 perceiving there to be no variation in payments and a further 36 responding 'Don't Know'. Perceptions of variation in compensation payments differed significantly depending upon whether or not the respondent had an SSSI; SSSI respondents were significantly more likely to perceive a variation in compensation payments and non-site respondents were more likely to respond 'Don't Know' (21/40) ($\chi^2_{05} = 5.189$; 1 d.f.; $p < 0.025$)

Some respondents pointed out that certain areas of SSSI on the mainland of Orkney (Evie, Stenness and Harray) were better compensated in comparison to the other areas of SSSI such as the Isles of Sanday and Rousay. The former areas had been the object of agreements reached in the early 1980s during the period of the most intense conflict between farmers and landowners, and the NCC. Many respondents tended to believe the system had matured in the last 10 years and payments to different areas had become more comparable. This perception was substantiated by SNH in Edinburgh whose spokesperson said that as more management agreements were completed and SNH land agents accumulated a portfolio of payments it became easier to calculate comparable levels of compensation.

A small number of farmer respondents with SSSIs designated in the latter half of the 1980s commented that the combination of the NCC gaining experience, increased public support for nature conservation and an increasingly limited budget, meant NCC/SNH were less likely to make large payments to secure management

agreements. However, there is insufficient data to say how widespread this trend was across Scotland.

All farmer respondents were asked if they thought farmers and landowners should receive compensation for any loss in income associated with an SSSI. There was considerable support for continued compensation of farmers and landowners. 74 respondents of the farmer survey supported compensation for farmers and 57 respondents supported compensation for landowners.¹

SSSIs were generally perceived to be fair despite the awareness of variation of compensation in management agreements throughout the 1980s. The principle issue of unfairness as perceived by farmer respondents was the limited application of SSSI designation to areas of particularly high nature conservation value, rather than across the farming community and the wider countryside as a whole.

6.2.7 Farmer perception of the method of calculating compensation.

Following the issue of whether or not there should be compensation for a loss in income, all respondents were asked their views on the current method of calculating SSSI compensation payments.

55/80 wished to keep the existing method of calculating compensation with 13/80 wanting to change to a more standardised payments method than the present method of negotiating individual compensation payments. The views of farmer respondents with and without SSSI designations were compared using the ChiSquared Test. It was found that there was no significant relationship between designation and preference for method of payment. ($\chi^2_{05} = 1.712$; 1 d.f; $p < 0.05$). Furthermore, 57/80 of all farmer respondents wanted to have the right to choose between one-off or annual compensation payments. Of those respondents against the concept of choice (10/80), 3 suggested one-off payments were unfair if the land was sold following compensation. (13/80 respondents responded 'Don't know'.)

6.2.8 Summary of main results in Section 6.2

¹ Marginally lower support for landowners is considered by the author to be due to the negative press coverage of certain NCC payments, for example the NCCs compensatory payment of approximately £1mn to J. Cameron (Chapter 2). In addition to this, the view was expressed by a number of farmer respondents that some local landowners had enjoyed higher compensation payments. The perception amongst farmer respondents was that because landowners are wealthier they can more effectively represent their interests.

There remained a degree of negative perceptions about the economic impact of SSSIs from those respondents without SSSIs. Results from those with SSSIs indicated that the designation of SSSIs had a minimal economic impact; in particular, changes in income, stock levels and land values were not as great as had been anticipated. Therefore there was a notable difference between those with experience of SSSIs and those respondents without experience. Therefore the concerns of the early 1980s were not realised although the negative perceptions of those without experience remain.

With respect to the perceived fairness of the system at grassroots, results are inconclusive, although the system was perceived to have become fairer over time.

6.3 Property rights issues

This section of the survey explored the political nature of the implementation of a policy which has scientific objectives. This included aspects of control over land use decisions and voluntary versus regulation methods of meeting policy objectives. Respondents were asked a number of questions in order to reveal their attitudes towards land use policy and to determine the local issues which arose from policy implementation.

6.3.1 Non-SSSI respondents' attitudes towards a designation on their land.

Non-SSSI respondents in the farmer survey were asked how they would feel about a designation on their land. Respondents were almost equally divided between being unhappy (14/40) about a designation or not bothered (16/40). 8/40 said they would be happy about a designation; 2/40 responded '*Don't know*'.

These results implied a substantial minority of respondents resistant to an SSSI designation on their land. However, 24/40 respondents reported that they would be '*Happy*' or '*Not bothered*' about a designation.

6.3.2 Farmer respondents perception of benefits and difficulties associated with SSSI designation

SSSI and non-SSSI respondents were asked about the real and perceived difficulties and benefits of SSSIs, in order to determine how they felt it did or would affect their farming interests.

Farmer respondents with SSSIs were asked:

"What, if any aspects of SSSI designation are beneficial (difficult) to you in your farming operations?"

Non-SSSI respondents were asked:

"Which, if any, of the following would you consider to be beneficial (difficult) aspects of SSSI designation to you in your farming operations?"

Respondents were offered four possible benefits or difficulties with an option to identify an 'Other' benefit/difficulty.² These are the categories used in Table 6.7.

Table 6.7 Perceived difficult and beneficial aspects of SSSI designation to farmer respondents

Beneficial aspects of designation	SSSI respondents	Non-SSSIs respondents	Difficult aspects of designation	SSSI respondents	Non-SSSIs respondents
A new interest in nature conservation	8	11	Loss of control	27	29
An increased interest in nature conservation	5	5	Legal disputes	0	5
Increased contact with government agencies	0	0	Time involved	0	2
Increase in income	8	12	Loss in income	0	1
None	17	10	None	11	3
Other	0	0	Other*	2	0
Don't Know	2	2	Don't know	0	0
Total	40	40	Total	40	40

* Same income but not enough work.

² See Appendix III for farmer questionnaire.

'Loss of control' over decision-making on the farm was the only difficulty mentioned by site respondents (27/40) (Table 6.7). A slightly higher proportion of non-SSSI respondents perceived 'Loss of control' as being a difficulty (29/40). Overall 37/40 non-SSSI respondents anticipated some form of difficulty compared to 27/40 of SSSI respondents.

In order to carry out a ChiSquared test for independence between having an SSSI designation and the perception of difficulties associated with designation. 'Loss of control' and 'Legal disputes' were combined to make one stream and compared with 'No difficult aspects'(Table 6.8).

Table 6.8 Perceived difficulties of an SSSI designation: SSSI and non-SSSI respondents

Response	Respondent		Total
	SSSI	No SSSI	
Loss of control & Legal disputes	27 (31.75)	34 (29.25)	61
No difficult aspects	11 (6.25)	3 (5.75)	14
Total	38	37	75

N = 80; 2 'Other'; 2 'Time involved'; 1 'Loss in income'; $\chi^2_{05} = 9.029$, 1 d.f.; $p < 0.01$.

χ^2_{05} was significant at the 1% level and this indicates an association between respondents perceptions of difficulties associated with SSSIs and whether or not they had a designation. That is, though all respondents thought loss of control and legal disputes to be the main difficulties, significantly more non-site respondents perceived these to be difficult aspects than did site respondents. Significantly less non-site respondents (3/40) than site respondents (11/40) thought there could be no difficulties.

This result showed that a significant number of non-SSSI farming respondents still had a negative perception of SSSI designation.

6.3.3 Farmer respondents perception of benefits associated with SSSI designation

Respondents with and without SSSIs were asked which aspects of a designation they saw as being beneficial (Table 6.7). *'No beneficial aspects'* was the most common answer by all farming respondents to this question and there was no significant difference between SSSI and non-SSSI respondents ($\chi^2_{05} = 1.418$, 2 d.f.; $p < 0.05$). The potential increase in income was the second most common response followed by a new interest in nature conservation.

The single greatest difficulty associated with SSSI designation was the loss in control. Overall the most common response regarding beneficial aspects of designation was, *'None'* followed by the potential increase in income.

6.3.4 Voluntary versus legal/regulation approaches to conservation policy

To further explore the reasons for difficulties in the implementation of SSSI regulation respondents from the farmer questionnaire were asked if they thought the legal approach to SSSIs was detrimental to the aims of the policy (Table 6.9).

"Do you think the legal nature of SSSIs is detrimental to the aims of the policy?"

Table 6.9 Farmer perception of legal approach to conservation policy:
comparison between SSSI and non-SSSI

Response	Respondent		Total
	SSSI	No SSSI	
Yes, detrimental	16 (16.86)	16 (15.14)	32
Not detrimental	19 (12.12)	4 (10.88)	23
Don't know	4 (10.01)	15 (8.99)	19
Total	39	35	74

N = 80; 6 'no response'; $\chi^2_{05} = 15.982$, 2 d.f.; $p < 0.001$.

The legal nature of SSSIs was considered to be detrimental to the aims of the system by 32/80 farmer respondents with an equal division between SSSI and non-SSSI respondents. 23/80 responded 'Not detrimental' and 19/80 'Don't know'. Significantly more SSSI respondents gave the response 'Not detrimental' than did non-SSSI respondents, and non-SSSI respondents were significantly more likely to respond 'Don't know'.

Farmer respondents were then asked:

"Do you think a voluntary approach is capable of achieving:

1. *The same*
2. *More than a legal approach*
3. *Less than a legal approach*
4. *Don't know".*

The majority (45/80) also perceived a voluntary approach only to achieve as much as or even less than, a legal approach. Many comments suggested that although respondents personally preferred a voluntary approach, they realised it was not

possible to achieve enough for conservation objectives. 21/80 farmer respondents replied that a voluntary approach could achieve *'More than'* a legal approach and 10/80 responded *'Don't know'*. There were 4 no responses. There was no relationship between the respondents view and whether or not the respondent had an SSSI ($\chi^2_{05} = 1.185$; 2 d.f.; $p < 0.05$).

6.3.5 Summary of the main results in Section 6.3

The main difficult issue in SSSI designation for farmer respondents was the loss in control of decision-making. While many respondents (with and without SSSIs) perceived there to be no beneficial aspects of SSSI designations, almost as many identified the potential increase in income as a benefit. Significantly more SSSI respondents perceived a legal approach to not be detrimental to the aims of conservation policy than did non-SSSI respondents which suggests there still remains a negative perception of SSSIs by many of those respondents without SSSIs.

6.4 Socio-political issues

Criticisms of a clash of personalities, a lack of consultation and communication were reported in the Orcadian during the most intense period of SSSI designations in 1983 and 1984. The results of Section 6.1 above which asked respondents for their main criticisms of SSSIs is also relevant in this section. The second principle criticism was *'personality clashes, lack of understanding and communication'* (13/80). Two changes desired by farmer respondents to the system of SSSIs were *'less staff turnover'* (1/80) and *'more co-operation/communication'* (7/80) (by the NCC with local farmers). This final section on SSSIs explores the current understanding of SSSIs across the farming community in Orkney in order to understand the basis upon which criticisms were made.

6.4.1 Farmer respondents understanding and knowledge with respect to SSSI designation

In order to examine whether or not farmer respondents understand the main aim of SSSIs they were asked: *"For policy-makers what is the MAIN AIM of SSSI legislation?"*

They were offered six possible responses from a prompt sheet (Table 6.10). This question was followed with, *"Do you think this has been achieved?"* and these responses are summarised in Table 6.11.

Table 6.10 Farmer respondents perceptions of the main aim of SSSI designations
(n=80)

Main Aim	Response
Conserving natural resources for scientific research	12
Conserving natural resources for wildlife and plants	61
Conserving landscapes for people and their leisure	2
Maintenance of rural incomes	2
Meeting public demand for nature reserves	1
Other	2
Total	80

'Other' includes 'To pacify conservationists'

As expected, the majority (61/80) correctly identified the main aim of SSSI designation is to conserve natural resources for wildlife and plants. Again the majority of all farming respondents (54/80) considered the policy to have been successful in meeting its aims.

Table 6.11 How successful SSSIs have been in meeting the main aim (n=80)

Main aim achieved	Response
Yes	54
No	17
Don't Know	9

There was no significant difference between SSSI and non-SSSI owners in the understanding of what the main aim of designation was $\chi^2_{05} = 0.798$, ($p < 0.05$) or in the perceived levels of success ($\chi^2_{05} = 2.455$, $p < 0.05$).³ There was also no significant difference in their attitude towards the idea of designating SSSIs. That is, 68/80 thought they were, in principle, a good thing. The remaining responses included 10/80 'not a good thing' and 2 'Don't know'.

6.4.2 Summary of main results in Section 6.4

It is possible to conclude that an understanding of SSSIs was held by the majority of respondents and that even those with no direct contact with an SSSI had knowledge of their purpose. Those with SSSIs had not developed a significantly more advanced level of knowledge or understanding about SSSIs than non-site respondents although they were significantly more likely to offer an opinion on SSSIs. The data in Section 6.1 suggests there is both the scope and desire for increased local co-operation and consultation by SNH (NCC).

6.5 General policy choices

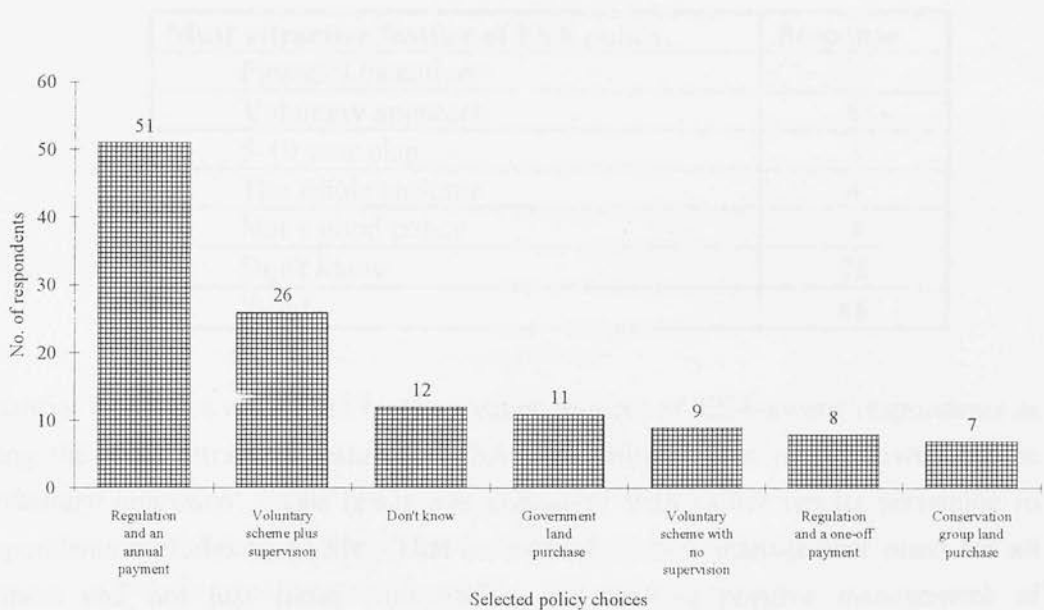
The discussion of the results so far has concentrated on farmers attitudes compared to those of ten years ago. This is an indirect method of examining farmers interests. The survey continued the indirect approach by asking questions relating to farmers future nature conservation policy preferences.

6.5.1 Policy choices: preferences of farmer respondents

All respondents from the farmer questionnaire were given a prompt sheet with eight possible policy options from which they could choose as many or few as they wanted. The options were as shown in Figure 6.1.

³ The local SNH office pointed out that they do not have much time for monitoring sites and work tends to be reactive than proactive. However, damage to SSSIs tends only to be a result of slight changes in agricultural activity.

Figure 6.1 Policy choices: preferences of farmer respondents (n=80)



When asked what kind of policy mechanism farmer respondents would like to see in place '*Regulation with an annual payment*' was the most popular choice (51/80), followed by '*Voluntary system with supervision*' (26/80). Although n=80, the total number of responses is greater than 80 as several respondents chose more than one option.

6.5.2 Farmer respondents perceptions of Environmentally Sensitive Areas (ESAs)

The difficulties of a more regulatory type of policy (SSSIs) are discussed above. The following question sought to determine the support for an additional or alternative policy for Orkney (ESAs). ESA designation had been proposed during the late 1980s by the voluntary organisations (NFUS, RSPB) and would cover the whole land area of all the Orkney islands.

Farmer respondents were asked if they had heard of Environmentally Sensitive Areas and if so, what they considered their most attractive features to be.

Although a high proportion of respondents (68/80) had heard of ESAs many did not have much understanding of them. The following results are biased by this fact. Many respondents had not considered policy mechanisms before so were unable to answer (28/80).

Table 6.12 Evaluation of Environmentally Sensitive Areas (n=68)

Most attractive feature of ESA policy.	Response
Financial incentives	23
Voluntary approach	8
5-10 year plan	2
The whole package	4
Not a good policy	3
Don't know	28
Total	68

Financial incentives were cited by the greatest number of 'ESA-aware' respondents as being the most attractive feature of ESA designation. This was followed by the '*Voluntary approach*'. This result was consistent with earlier results pertaining to respondents attitudes to SSSIs. That is: more flexibility; management plans for **all** farmers and not just those with SSSIs; and seeking positive management of conservation features.

6.5.3 Planning Controls: farmer respondents perceptions

A second policy option for Orkney farmers is the extension of planning controls to all or specific aspects of agricultural activity. Farmer respondents were asked how they would feel if presented with planning controls on their farms. The majority (55/80) considered that these would be very unsatisfactory. 26/55 replied that they would actually leave farming if planning controls were imposed. Many felt they had more than enough restrictions already and any more would be too much to live with. There was no relation between whether or not the respondent had an SSSI and his/her attitude to planning controls ($\chi^2_{05} = 0.947$, 1 d.f., $p < 0.05$).

6.5.4 Summary of main results in section 6.5

Regular payments were the highest priority to farmer respondents and there was resistance to too much control. While farmer respondents were widely supportive of the purpose of conservation policy they supported voluntary policy options.

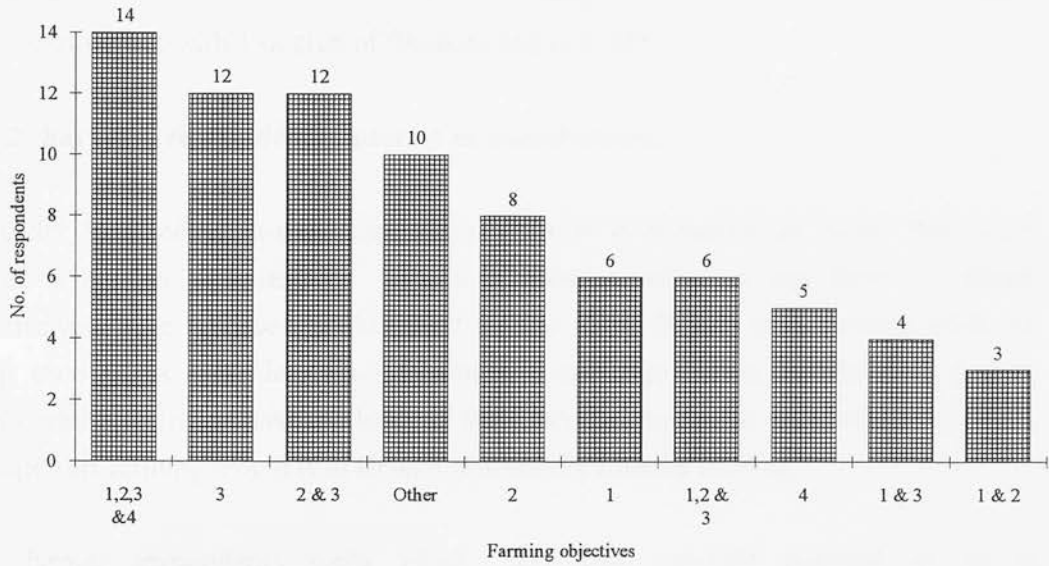
6.6 Farming objectives of respondents

The discussion of the results so far has concentrated on an indirect method of examining farmers' interests. The discussion continues by asking questions relating to respondents' farming objectives, interests in conservation and membership of interest groups. This is a direct approach to establishing farmer interests. Section 6.6 also examines how interests of individual farmers are represented through interest groups.

6.6.1 Farming objectives of farmer respondents

Respondents were asked to choose among five alternative farming objectives:- *'maximising income'*; *'living and working in the countryside'*; *'being your own boss'*; *'working the land for future generations'* and, finally, respondents were also given the opportunity to identify their own objective. The following Figure 6.2 illustrates the distribution of responses. (A flaw of this question was that initially it urged respondents to choose one objective as their main objective which some did reluctantly and after the first 10% of responses the interviewers altered the question to allow respondents to choose as many or few answers as they pleased. This means that the 31/80 single objective responses are possibly inflated).

Figure 6.2 Farming objectives of farmer respondents (n=80)



Key to Figure 6.2 Farming objectives	
1	Maximising income
2	Living and working in the countryside
3	Being your own boss
4	Working the land for the future
Other	To get out of farming (4) Its just a way of life (5) To run a successful organic farm (1)

Very few respondents (6/80) considered maximising income to be their sole farming objective and only 31/80 (12+8+6+5=31) defined one single objective with '*Being your own boss*' as the most popular. This is consistent with the anti-regulation sentiment conveyed in results to earlier questions about policy choices. The remaining 49/80 had multiple objectives. 33/49 of those with multiple objectives included '*Maximising income*' as one of several farming objectives and 37/80 included non-tradable objectives only such as '*Living and working in the countryside*', '*Being your own boss*' or '*Other*'. These results support the theory of the alternative paradigm that individuals are not totally rent-seekers.

Respondents' farming objectives were independent of location on the island ($\chi^2_{.05} = 3.304$), education ($\chi^2_{.05} = 0.459$), type of farm ($\chi^2_{.05} = 2.299$), size of farm ($\chi^2_{.05} = 0.522$) or age of respondent ($\chi^2_{.05} = 0.032$). Farming objectives were also independent of whether the respondent had an SSSI or not ($\chi^2_{.05} = 0.036$) and their

status as an 'incomer' or a 'local' respondent ($\chi^2_{05} = 0.566$). (All Chi-Squared Tests were carried out with 1 degree of freedom and $p < 0.05$).

6.6.2 Farming respondents' interest in conservation.

In order to discover farmer respondents interest in conservation issues they were asked a number of questions. These included whether or not they considered themselves to be a conservationist, and whether they did any conservation work on their own farms. To determine whether or not there was a link between farmer conservation activities and the level of farm income they were asked if they thought prosperous farming would lead to environmentally friendly farming.

All farmer respondents were asked: *"Do you consider yourself to be a conservationist?"* 66/80 of farmer respondents did consider themselves as conservationists but many were eager to point out that they did not mean conservationists in a popular sense (as portrayed on television and the press) but in a traditional sense of managing the land in a conservation-minded way. There was no relationship between whether or not the respondent had an SSSI and their self-perception as a conservationist ($\chi^2_{05} = 0.215$, $p < 0.05$).

The majority of respondents did no grant-aided or self-funded conservation work (grant-aided (50/80), self-funded (43/80)). What grant-aided conservation work did occur tended to be ADP environmental payments.⁴ Self-funded conservation (37/80) was mainly dry-stone dyking undertaken for functional reasons rather than through any specific interest in conservation. There was no relation between whether or not the respondent had an SSSI and their propensity to undertake grant-aided or self-funded conservation work ($\chi^2_{05} = 0.215$, 1 d.f., $p < 0.05$).

54/80 respondents thought prosperous farming would lead to environmentally friendly farming. A comment made by several respondents was that if prosperous the farmer would then have resources to allocate to tree-planting, hedge maintenance, creation of ponds or maintenance of dry stone dykes. 20/80 thought there was no reason to believe prosperous farming would be environmentally friendly and it was more

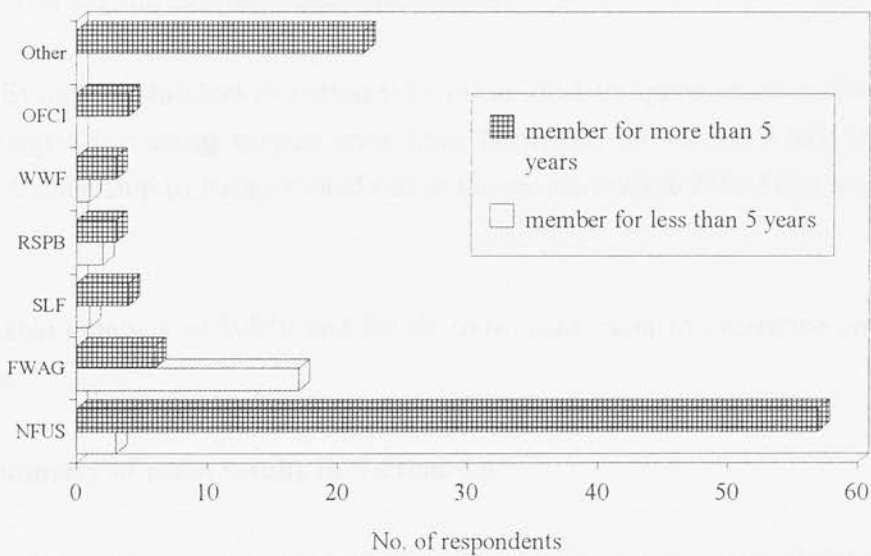
⁴ ADP = Agricultural Development Programme, an EC initiative to provide funds for chosen areas. A 5 year plan is developed for any farm opting into the scheme and environmental payments are made for, e.g. dry-stone dyking and fencing off wetland areas.

dependent on the individual farmer. The remaining 6/80 respondents responded 'Don't know'.

6.6.3 Membership of groups

Membership of interest groups is an explicit expression of an individuals interests. Therefore, farmer respondents were asked about their membership of groups and their perceptions of effectiveness of these groups in representing their interests.

Figure 6.3 Membership of local interest groups: farmer survey respondents (n=80)



As expected the NFUS had the largest membership of farming respondents, followed by FWAG(S) (founded in the early 1980s) and 'Other'.^{5, 6}

⁵ 'Other' included: Scottish Crofters Union (2); Highlands and Islands Sheep Health Association (2); Sheep Farmers Association (1); Soil Association (3); Game Conservancy (1); Orkney Agricultural Discussion Group (1); Orkney Organic Group (1); Orkney Natural History Society (1); Scottish Society for the Prevention of Cruelty to Animals (1); National Sheep Association (1); Friends of the Earth (1); Field Studies Council (1); Jersey Wildlife Preservation Trust (1); British Organic Growers (1); National Trust for Scotland (1); Greenpeace (1); Rare Breeds Survival Trust (1).

⁶ Figures for Orkney Field Club and 'Other' are not divided into more than or less than 5 years as the figures are very low.

The majority of NFUS members had been with the NFUS for most if not all of their farming lives, while the majority of FWAG(S) membership was relatively new, occurring within the last 5 years. There was a small SLF membership of which the majority had been members for more than 5 years. RSPB and WWF had a relatively small farmer respondent membership. A substantial proportion of respondents (21/80, see 'Other' above) were members of other smaller farming, conservation or environmental organisations as described above.

The NFUS membership in Orkney has declined by 16% in the last 7 years from 1064 in 1986 to 890 in 1992. A number of respondents indicated dissatisfaction with their NFUS membership, deciding to remain members for the purpose of cheap insurance. Some had already discontinued their membership.⁷

FWAG(S) membership had increased from 60 in 1991 to approximately 200 in 1993 which suggest increasing support over time. However, the local FWAG(S) advisor thought membership to have levelled out at the moment while FWAG(S) seeks more funding.

Membership numbers of WWF and RSPB were insufficient to determine any trends over time.

6.6.4 Summary of main results in Section 6.6

There are two main conclusions to be drawn with respect to farmers objectives: that respondents objectives are multidimensional; and secondly, they are independent of socio-economic variables such as age and education. Respondents objectives are therefore more complex and personal than those associated with single objective rent seekers. There is no evidence to suggest that the status of farmer respondents with respect to SSSI designation had an impact on respondents interests in conservation. The majority of farmers considered themselves to be conservationists, although there was little conservation work being undertaken by respondents and this is perhaps because the majority perceived that prosperous farming leads to a more environmentally friendly approach. NFUS was the principal interest group to represent farming interests. However, there is also a notable membership of other

⁷ However, two important factors affecting levels of local NFUS membership were amalgamation of farms and some farmers were retiring and/or renting out land. The local NFUS secretary pointed out that they lose and gain membership over time and there is no real difference in membership overall.

farming groups which represent less mainstream farming interests. Membership of environmental and conservation groups was low.

6.7 Representativeness of interest groups and translation of interests

Having examined farmers' interests, this section examines the translation of individual interests from a local level to the policy-making level, thereby broadening the analysis of data from individual interests to include interest groups and policy-making arenas. This section aims to determine the relative importance and role of groups according to farmers (their members), local organisations and policy-makers.

All respondents (farmer, local organisation and policy-maker) were asked what they considered the main role of an interest group to be. Following this, farmer respondents were asked: which organisation they felt to be the most representative of their interests; the extent to which the NFUS and conservation groups represented their interests at the UK and European level; and the extent to which conservation issues were perceived to vary between Orkney and the rest of the UK.

6.7.1 Farmers' perceptions of interest group roles and effectiveness

Farmer respondents:

The majority (57/80) of farmer respondents perceived the main role of any of the groups such as the NFUS should be to represent members' interests through lobbying (Table 6.13).

Table 6.13 NFUS's most important role (n=80)

NFUS's most important role	Response
Representing members interests through lobbying	57
Providing information to members	7
Both of the above	13
Don't know	3
Total	80

Table 6.14 Perceived effectiveness of NFUS in the above role (n=80)

Effectiveness	Response
Not effective	7
Not very effective	14
Effective	24
Quite effective	24
Very effective	9
Don't know	2
Total	80

Farmer respondents generally considered NFUS to be reasonably effective in its role of representing their interests.

Local organisations (n=8)

Local organisations were equally divided in their views of a groups role between '*Representing members interests through lobbying*' (4/8) and '*Both of the above*' (4/8). RSPB and WWF were identified by many respondents as having wider aims which do not relate directly to the needs of their members. That is, the promotion or protection of the 'environment' or 'birds' was seen to be the main objective rather than the advancement of members interests.

Policy-makers (n=9)

6/9 of policy-maker respondents indicated that a groups most important role is to lobby for members' interests. 1/9 considered that it was to provide information, while the remaining 2/9 (which included conservation group respondents) suggested groups had wider, public interests. WWF was perceived to be philosophy driven and describes their remit as: "*to represent the interests of the environment.*" The WWF respondent explained:

"they use the weight of their arguments rather than the weight of their membership to push an issue" (Policy-maker respondent, 1993).

Therefore, this question revealed a fundamental difference between farming groups, and environmental and conservation groups. That is, the general perception across all respondents was that the most important role of the NFUS is to represent the interests

of their members by lobbying. The most important role of conservation groups was less clear and included providing information and representing the interests of the environment.

6.7.2 Representativeness of interests

This research sought to discover the level of input into policy-making which comes from the local level and the significance of the local influence as a determinant of policy-making. These results are intended to offer an understanding of how close local organisations and farming respondents felt to policy-making.

Farmer respondents were asked, *"Which organisation is the most representative of your interests?"*.

46/80 farming respondents considered the NFUS the most representative organisation for them. The NFUS has 121 branches which each elects its own representatives to Area Executives, of which there are 28. Each area then elected representatives to the Unions 125-strong national Council. The Council annually elected two vice-presidents and a president to lead the Union. The local NFUS respondent argued that agricultural interests are thoroughly and fairly represented through this devolved and accountable system.

The remaining 34/80 respondents were divided between a range of other groups (24) and responding that there was no single organisation representative of their interests (10). The range of other groups included: SCU; SLF; FWAG; SAC; and, Other⁸.

Farmer respondents were then asked how representative different interest groups are of their interests (Table 6.15).

⁸ Although there are a number of small organisations representing organic growers, sheep farmers etc they are considered marginal in terms of political influence. Their resources are limited which constrains them from engaging in political lobbying to any significant extent.

Table 6.15 Farmer respondents perceptions of the representativeness of interest groups (n=80)

How representative	EU farm groups	UK farm groups	EU conservation groups	UK conservation groups
All of the time	2	4	2	6
Most of the time	19	29	12	17
Sometimes	36	37	23	30
Never	12	5	8	8
Don't know	11	5	35	19

The results in Table 6.15 illustrate that 33 farmer respondents considered UK farm groups to be representative of local interests 'all' or 'most of the time'. The majority considered the NFU(S) to be representative 'sometimes'. Those who considered UK farm groups i.e. the NFU(S) 'never' to be representative of their interests were members of FWAG(S), the Soil Association and other smaller, lower-profile farming groups. For EU farm groups and EU and UK conservation groups there was a higher number of 'never' or 'don't know' responses. These results may reflect a lack of knowledge about European politics and conservation issues.

In order to determine other channels of representation of their interests, farmer respondents were asked two questions: to what extent they thought the local council (Orkney Islands Council, OIC) was involved in farming and conservation issues; and if it was involved, whether or not it had a bias towards either interest.

OIC was perceived by 41/80 farmer respondents to be involved to some extent in farming. 38/80 farmer respondents considered OIC to be involved in conservation issues through its Agriculture Working Group, funding of FWAG, green tourism and marketing of farming.

Table 6.16 Perceived bias of OIC to farming or conservation interests: farmer respondents (n=80)

Response	Number of respondents
Definitely farming	9
Probably farming	14
Neutral	23
Probably conservation	9
Definitely conservation	2
Don't know	23

An even proportion of farming respondents perceived the council to be biased towards farming, 'neutral' or they didn't know. Only a small proportion perceived the council to be biased towards conservation. Council membership by farmers was considered to be one reason for OIC bias towards farming interests by four farmer respondents (Table 6.16).

6.7.3 Translation of local farmer interests to policy arenas

To further determine the connection between farmers and organisations, local organisation respondents were asked about the channels of communication existing between themselves and farmers, and the wider community (Table 6.17).

Table 6.17 Local channels of communication: local organisations (n=8)

Local organisation	Occasional letters and calls from individuals	Community council representations	Local meetings	Other
RSPB	=	occasional	=	local radio and newspaper
NFUS		=	=	local radio and newspaper
SNH		=		farm visits
SAC			=	farm visits
SOAFD	=	occasional		general farm meetings
OIC -planning				paper published
OIC - economic				paper published
FWAG(S)	=		=	farm visit

Local organisations generally had no formal system of contact with the Orkney community and tended to rely on the local media (newspaper and radio), their own publications, occasional community council representations, local organisation meetings covering particular issues and farm visits. Organisations including SOAFD, SAC, FWAG(S) and SNH undertook regular farm visits. Individuals represented their interests to local organisations by writing occasional letters and telephone calls. Therefore, while the results showed that there was not a great deal of formal contact between local organisations and individuals, there appeared to be a degree of contact on an individual (organisation) to individual (farmer) basis. No local organisation respondent indicated a need for a more formal or regular system of community representation.

In representing the interests of Orkney at Scottish Office, Westminster and EU levels, neither the RSPB, NFUS, SNH, SAC, SOAFD, OIC nor FWAG(S) perceived any real problems. The OIC Economic Department did point out the constraint of access to departments in Edinburgh because of the time and expense involved in going to meetings on the mainland. One local organisation respondent commented that sometimes the Scottish or UK interest overrode the local Orkney interest.

On policy issues, local organisations tended to rely on their head offices in Edinburgh. The NFUS, RSPB, SOAFD and OIC had direct contact with the Scottish Office. The OIC were the only organisation with direct EU contact, although their EU representative covered all OIC departments and therefore had little time for specific farming or conservation issues.

6.7.4 Summary of main results in Section 6.7

A distinction was made between the role of farming groups and conservation groups: the farm groups role was to promote members interests and conservation groups tended to have a less clearly defined role including advancing conservation interests and providing information. RSPB was the only interest group actively representing conservation interests in Orkney. In terms of the representation of private economic interests (farming) and their translation to policy arenas the NFUS was reasonably effective. Local organisation contact with the local community was informal and ad hoc. Local organisations represented local Orkney interests at their head offices and relied on their head offices to supply them with information of policy development.

Part 2 Networks, influence and competition

6.8 Networks

From the results presented in Part 1 a profile of individual farmer respondents interests has been derived, indirectly from their attitudes to SSSIs and other policy options, and directly from their expressed farming objectives and their membership of interest groups. The discussion in Part 2 widens the focus of interest to include an analysis of organisational networks. The aims of this part are to identify the key groups, public and private, in policy-making, and how they interact. Part 2 identifies the organisations farmers depended upon for the information necessary to conduct their farm business, and the individuals and/or institutions which local organisations and policy-makers relied upon to implement or design land use policy. Information exchange was assumed to be the basis of networks and therefore the key institutions were identified as being those most commonly used by respondents of all three surveys. This information was supported with independent data on interest group membership and income because these were assumed to be necessary for any organisation to generate useful information.

In order to establish existing networks, and develop an understanding of the overlap of networks the analysis sought to determine the overall key groups and the source of their support. It also investigated the groups most influential at the local, regional, national and European policy arenas. Integral to the concept of overlapping networks was the concept of ongoing competition of interests (private farming and landowning interests, and public conservation and environmental interests) at all levels of decision-making. An understanding of the interaction of key groups was also sought in order to determine the competition of interests and its effect on policy-making.

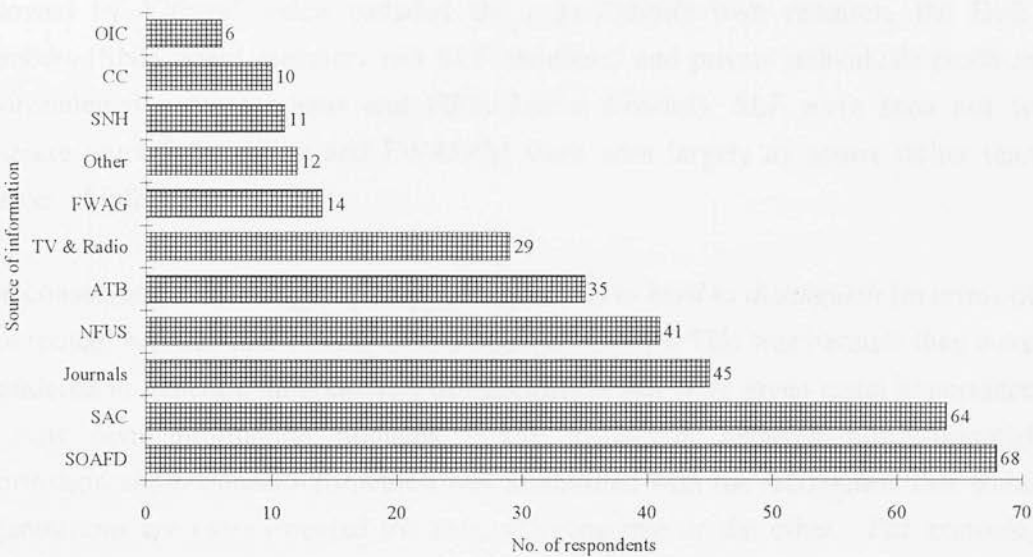
The results in this section were mainly generated from the policy-maker survey but are also supported by farmer and local organisations where relevant.

6.8.1 Important Sources of Information for farmer, local organisation and policy-maker respondents

All respondents were asked to identify their important sources of information (Figure 6.4).

Farmer respondents:

Figure 6.4 Sources of information for farmer respondents (n=80)



Overall, SOAFD and SAC were seen to be the key sources of information to farmer respondents (Figure 6.4). Also important were Journals, NFUS, ATB and TV and Radio. There were a number of organisations which were important to a few farmer respondents and these included FWAG(S), SNH, CC and OIC. 'Others' in the above Figure 6.5 included the Tenant Farmers Association, the Soil Association, the British Organic Farmers and North Eastern Farmers.

Sources of information for local respondents (n=8)

At the local organisation level SOAFD emerged as the most important overall source of information, followed by SNH, then Orkney Islands Council (OIC), FWAG(S), SAC, NFUS, Journals and magazines, and the RSPB. Local offices attached a great deal of importance to to their own (and other) head offices in Edinburgh.

Sources of information for policy-maker respondents (n=8)

Policy-makers relied heavily on a small core of organisations. The 1st and 2nd most commonly chosen were SNH and the RSPB respectively. SNH, SOEnD and RSPB all considered SNH to be the most important which may have reflected the role of SNH as statutory advisors who have to conduct extensive research. Other important sources of information were the NFUS, SOEnD, SOAFD, SAC and Journals.

Radio and television were the next most commonly mentioned source of information, followed by 'Others' which included the organisation's own research, the DoE, members (SNH board members and SLF members) and private individuals (such as environmental correspondents and HRH Prince Charles). SLF were seen not to generate much information and FWAG(S) were seen largely as actors rather than sources of information.

One conservation interest group respondent said: "*It is hard to distinguish [in terms of importance] between SNH, SOAFD and SOEnD*" (1993). This was because they were considered to generate different sets of information and were given equal importance in their own information domains. The distinction between policy-oriented information and technical information was established with the recognition that some organisations are more oriented towards providing one or the other. For example, SAC and SOAFD were seen to provide technical information while the RSPB and SNH provided policy information.

Having established what were generally important sources of information to respondents, Table 6.18 compares the responses of all three survey respondents to the question, "*What do you consider to be the **single** most important source of information for you in your work?*".

Table 6.18 Single most important source of information for all survey respondents:

	Farmers (n=80)	Local organisations (n=8)	Policy-makers (n=8)
SAC	48%	12.5%	
SOAFD	35%	25%	
SNH		25%	50%
OIC		12.5%	
FWAG(S)		12.5% (head office)	
RSPB			12.5%
NFUS	5%	12.5% (head office)	12.5%
Journals	5%		12.5%
Other	2.5% (Soil Association)		12.5% (own research)
ATB	2.5%		
TV	1.25%		
CC	1.25%		

Two main points are illustrated in Table 6.18: the key organisations for information provision at each level of decision-making, and the extent of information provision across decision-making levels by any single organisation.

The single most important source of information was not the same at all three levels. However, SAC, OIC, SNH were all the most important at more than one level. Although by fewer respondents, the NFUS was seen as the singularly most important information source across all 3 levels. For technical and practical information at the local level the following were considered to be the most important: SAC, SOAFD and SNH. More policy oriented information was generally taken from SNH and Journals.

As a general source of information the Crofters Commission and FWAG(S) did not rate highly although they were considered to be the single most important by 4 and 2 farming respondents respectively. This suggests they were of more interest to those respondents with special interests (information needs).

6.8.2 The most important ways to keep up to date with new ideas and developments in land use and nature conservation: farmer, local organisation and policy-maker respondents

In order to discover which organisations are integral to decision-making thus providing new and useful information, all respondents were asked, "*What is the **single** most important way you keep up to date with **new** ideas and developments in farming and land use?*"

Farmer respondents (n=80)

The farming respondents' most popular sources of new ideas were '*Other farmers, family and friends*', (25/80); '*SAC*' (20/80); and '*journals*', (18/80).

Local organisations (n=8)

The single most important way to keep up to date with new ideas for local organisations tended to be through their head offices. The RSPB used its agricultural advisors in Edinburgh, as did NFUS, SAC (Edinburgh and Aberdeen) and SNH. Farmers were considered to be the most important source of new ideas by the remainder of respondents. Also considered to be important were other local organisations which included SAC, FWAG(S), NFUS, RSPB, ATB and SNH and TV, radio, newspapers and study visits to Edinburgh. The reliance on other local organisations was further explored by the following question:

*7a Do you think the following groups are in **regular** contact with one another? 7b Please indicate the **strongest working relations**. 7c. Please indicate any **difficult relations**, if any, between the above local organisations. Why do you think this is the case?* Respondents were given a matrix with all the local organisations listed (This is in Appendix III, in the local organisation questionnaire').

Local organisations had a good working network with each other with the strongest relations existing between (i) NFUS, SOAFD and SAC; (ii) SAC and FWAG(S); and (iii) Orkney Islands Council, FWAG(S), RSPB and SNH. Therefore, there was two distinct groups of agricultural and conservation interests with a degree of bridging by SAC and FWAG(S).

Policy-makers (n=9)

Information to policy-makers about new ideas and developments in land use and nature conservation came from three main sources.

The most common source (3/9) was through research surveys conducted by several organisations. The second was journals and newspapers (2/9), and the third source was members at the local level (2/9). That is, ideas came to SLF from its membership and to SNH from its area offices. One SNH respondent commented that to keep up with new ideas and developments in land use and nature conservation he relied upon:

"joint efforts from board members, staff and the regional management team. Few of these, if any, come from the policy directorate. Ideas tend to come from the grass roots. When they come to main board we then get in touch with the policy unit to develop these ideas" (SNH policy-maker respondent, 1993).

Contacts with civil servants were also important to one respondent (1/9).

SOEnD was less receptive to keeping in touch with new ideas:

*"We try more to keep things the way they are - we don't try to kick off ideas. SNH do - they are in the frontline and we give approval for the different ways of using the cash. SNH have implemented new ideas in Islay and the Flow Country"*¹ (SOEnD policy-maker respondent, 1993).

¹ Islay Geese Control Scheme and the Flow Country Peatland Management Scheme.

6.8.3 The source and application of information on UK and EU farming and conservation policies: local organisation and policy-maker respondents

In order to determine group and organisation contacts on wider policy issues, both local organisation and policy-maker respondents were asked how they best kept up to date with the development and application of EU policies.

Both sets of respondents were asked, "*Where does [for example] 'RSPB' obtain information on the application and development of National UK (or EU) policies?*" Respondents were given a list of sources of information including an 'Other' option in which they could express a source not listed.

Local organisations (n=8)

Local organisation respondents had two main methods to keep up to date with the development of UK policies: information was passed on to them through head quarters and through direct involvement with a government minister or civil servant. The RSPB and NFUS used all possible sources of information (as listed in Appendix III, 'Local organisation questionnaire') which reflected a keen desire to maintain an up-to-date knowledge of what is going on (2/8). The UK civil servant, UK government minister and Scottish Office departments (SOAFD and SOEnD) were the most commonly used (5/8). FWAG, more known for its apolitical stance (Cox *et al*, 1986) mentioned the local NFUS and SOAFD offices as their sources of information (1/8).

The above sources of information on UK policy developments were also relevant for EU policy developments. The RSPB "*utilised every means available*" (RSPB), as did the NFUS (2/8). Other local organisations relied on their head offices in Edinburgh who dealt directly with European issues (5/8). The Orkney Islands Council economic department had an EU liason officer who liases directly with the EU (1/8).

Policy-maker (n=10)

For policy-makers information on the development and application of UK policies for nature conservation came primarily from the following government departments; SOEnD (5/10), SOAFD (2/10), DoE (2/10) and MAFF (1/10). The House of Lords was considered by one private sector respondent rather to be a sink of information

than a source and government ministers were described as '*bottom of the list*'. (The same categories were applied for this question to policy-makers as for the local organisation question).

With respect to the development and application of EU policy information, sources for policy-makers appeared to be more numerous. They included the European Union, the RSPB, respondents' MEPs, the UK civil service and the Brussels office of organisations. Much EU information was perceived to filter through government departments. SOEnD agreed that most information came through Westminster (MAFF and DoE) although there was a desire now to establish more direct contact and representation of Scottish interests at the EU. The increased number of sources reflected the greater requirement of policy-maker respondents to keep in touch with new information.

6.8.4 Summary of main results in Section 6.8

Core information requirements of farmers, local organisations and policy-maker respondents divided into two types: policy and technical. No one single organisation stood out as providing all the new ideas and developments in land use and nature conservation policy. A core of key organisations existed at each level (farmer, local organisation and policy-maker) specialising in their 'type' of information (policy or technical). Only a very few organisations were important across all levels of decision-making: local Orkney, Scottish Office, UK Westminster and EU.

Sections 6.9 and 6.10 further develop the concepts of influence, networks and competition. Section 6.10 explores networks and the competition and associations between different organisations and interest groups.

6.9 Influence

Dependence upon specific organisations for information awards them a degree of influence. To be in a position to generate information which is in demand, groups have to have a membership in order to maintain their income. Data on the membership and income of key interest groups in England and Scotland was collated from groups Annual Reports and is included in Appendix VI. A summary of this information is given below (Table 6.19).

Table 6.19 Membership and incomes of key interest groups in Scotland and England

	Membership (1993)	Income (1990)
Key groups in Scotland	RSPB, NFUS, WWF, SWT. <u>Membership range:</u> 26,000 - 12,000	NFUS, SWT, SCP and SLF. <u>Income range:</u> £1,000,000 - £290,000.
Key groups outwith Scotland at the UK policy-making level	RSPB, County Wildlife Trusts, FoE(UK), WWF, NFU <u>Membership range:</u> 850,000 - 100,000	RSPB, WWF, NFU, BTCV, RSNC. <u>Income range:</u> £22,000,000 - £5,000,000.

Membership and income award a group the basis for political influence.²

6.10 Policy-making arenas

The following discussion is based on results from the local organisation and policy-maker surveys and is a summary of their perceptions of the key groups, their type of influence and their forms of interaction in terms of networks and competition.

6.10.1 Key groups

It is the purpose of this section to establish which groups are perceived to be the key groups in terms of policy-making.

Local organisations and policy-maker respondents were asked an open ended question about which interest groups they perceived as being of importance at different levels of policy-making. Table 6.20 presents the results of this question.

² 1990/91 was the only year in which income figures for all groups was available. There is not expected to be a significant divergence between income levels in 1990/91 and 1992/93 and the 1990/91 figures are therefore used to support 1993 membership figures.

Table 6.20 Arenas of influence³

	Scotland			UK	European	International
	Orkney (grassroots)	Scotland (grassroots)	Scottish Office			
Farming						
COPA					=	=
NFU				=	=	
NFUS	=	=	=	-	-	
SAC	=	=	=			
SCU		=	=	-	-	
Landowning						
CLA				=	=	
SLF		=	=	-	-	
Conservation						
BTCV				-		
CPRE				=	-	
FWAG(UK)				=		
FWAG (S)	=	=	=			
NT				=		
NTS		=	=			
Ramblers Assoc		-	=	=		
RSNC				=		
RSPB	=	=	=	=	=	=
SCP	-	=	=			
SWCL			=	-		
SWT	-	=	=	-		
WCL				=	=	-
Environmental						
FoE(UK)				=	=	=
FoE(S)		=	=			
Greenpeace		-	-	=	=	=
WWF		-	=	=	=	=

= the group has an office

- the group has a membership or regular influence

For the purposes of analysis groups were divided into the four main categories: farming, landowning, conservation and environmental. Within these categories they were then presented in alphabetical order rather than order of importance, because local organisation and policy-maker respondents were not asked to rank groups in order of perceived importance. Although SAC is not an interest group it was

³ For more information on the organisations mentioned in the survey and their characteristics see Appendix V.

considered to have significant influence on policy and policy implementation at a grassroots level by many respondents.

Overall the groups with the most influence on nature conservation policy in Scotland were perceived most often to be the RSPB, NFUS, WWF, followed by SAC, NTS, SWT and SLF. From Table 6.20 it is evident that there is a concentration of groups at the UK policy-making level which illustrates its significance in terms of policy decisions.

From Table 6.20 there are several main points to note. During the interviewing conducted for this research it became clear that each interest group had a distinctive character which emanated from its *modus operandi*, its chosen remit and the political market (grass roots, Scottish, Westminster and/or European Union) in which it functioned.

There were several remits or *modi operandi* which affect the type of influence an interest group may have exerted. Some interest groups limited themselves mainly to one method of influence in one influence arena, for example FWAG(S) operated at the grassroots level, giving practical advice to farmers and landowners within Scotland, while others such as the RSPB operated across wider policy arenas. The RSPB used a range of tactics including talking to local communities at the grass roots level and lobbying the international policy arena through letters and presentations to key individuals or groups. WWF had a very wide remit encompassing broad, global environmental objectives and it operated across all policy arenas except the local Orkney grassroots level. Despite a considerable degree of overlap in groups working in different policy communities, two distinct policy communities emerged: groups in Scotland and groups outwith Scotland. The policy community in Scotland was perceived to be influenced at times by groups which normally focused on Westminster.

6.10.2 Interest group networks

It was shown above (Table 6.20) that many groups in Scotland were UK groups with devolved Scottish offices, or independent Scottish groups with sister interest groups in England. There existed strong formal and informal links between environmental and conservation organisations within Scotland. There also existed strong links between the two principal environmental and conservation interest groups in Scotland and England (RSPB and WWF). Both groups maintained a devolved Scottish office in addition to their UK headquarters in England. SWT had regular formal links with RSN, the umbrella organisation for the County Trusts in England.

A formal network for conservation and environmental interest groups in Scotland had been established through Scottish Wildlife and Countryside Link (SWCL) which co-ordinated 'working parties' to deal with specific issues associated with agriculture, forestry, marine and freshwater. All organisations which were members of SWCL had representatives on its working groups.

England also had an established network for environmental and conservation organisations, known as Wildlife and Countryside Link (WCL). WCL was older and larger than its Scottish counterpart (See Figures VI.3 and VI.4, Appendix VI) and hence tended to be more of a significant lobbying force. WCL and SWCL co-ordinated with each other and this represented a formal network between England and Scotland.

A more informal network also existed although this was less easy to characterise. It was reflected by the fact that respondents knew so much about other organisations. The shared interests and relatively small geographical and political area of Scotland in which they work made this inevitable. Conferences, in particular, were recognised to be regular meeting places. There was flexibility over coalitions between groups, such as WWF, SWT and RSPB, during lobbying.

An interesting point to note was that the farming and landowning organisations (the NFU, SLF, SCU) did not participate formally with SWCL although NTS and SNH did have farming and landowning members on their executive committees. Furthermore, there was no similar umbrella organisation linking farming groups although policy-maker respondents from agriculture and landowning interests indicated that they did meet over certain issues when required. The fact that the NFU,

"The NGOs are smitten with human weakness - competitiveness. People in the same fields mobilising different constituencies. SWCLs organisations overlap. For example, SWT and SCP have a massive overlap - why have separate organisations other than because of competition? SCP and SWT are offshoots of BTCV and RSN. It is insinuated in Scotland that Scotland is a thing apart and ought to have its own show but there is too small an amount of money to be able to do this. SWCL is made up of organisations who won't give up their rights. If you amalgamate them the competitive element is taken away" (Policy-maker respondent, 1993).

The benefit of competition between conservation groups was highlighted by another policy-maker respondent:

"The unity of the movement is not necessarily a good thing and the more groups there are the better to attract a wider clientele" (Policy-maker respondent, 1993).

Competition between farming and landowning interest groups:

There was only one farming (NFU/NFUS) and one landowning organisation (CLA/SLF) in England and Scotland which were representative of these interests. The existence of only one farming organisation is explained by the government's decision following World War II to allocate the NFU special powers of consultation over the Annual Price Review. As a result the NFU/NFUS developed a monopoly over the representation of farming interests at a national and EU level of policy-making.

Although there were a number of small organisations representing organic growers, sheep farmers etc. mentioned by respondents (and also by farmer respondents in Section 6.6) they were considered marginal by respondents in terms of political influence. Their resources (membership and income) were limited which prevented them from engaging in political lobbying to any significant extent.

In addition to this there was no real competition between the farming and landowning organisations because of the general difference between farm business and landowning interests. There was an element of competition between the NFUS and SCU over crofting membership. The argument was made by the Scottish Crofters Union respondent that the NFUS ought to give up its crofting membership of approximately 600 and concentrate on farming interests.

Competition or convergence between farming and conservation interests

Respondents were asked what they considered the main role of an interest group to be. Two distinct poles of interest and activity emerged between conservation/environmental groups and farming/landowning groups. The main difference was in the nature of the interest: private or public. That is, between the private interests of land-based groups (NFUS, NFU, SLF, CLA and SCU) and the public interests of conservation and environmental groups (RSPB, WWF etc.) The main role of the former was to **protect** their member's private interests and the latter was to **promote** the public interest.

The general perception of policy-making respondents appeared to be that while the more radical environmental groups - Greenpeace and FoE - had become more publicly responsible and less openly critical of the establishment, publicly the land groups such as NFUS, CC and SLF had had a 'green rinse' and were adopting a more environmentally friendly image. As environmental groups had become more politically credible, land groups had altered their image, and the diametric opposition which traditionally characterised these interests was perceived to have become less apparent.

One policy-maker respondent (1993) commented on a recent joint press release by SWT, NFUS and the SLF. He commented that although it illustrated a move closer, it was "*a bit of superficial public relations*" and their basic interests had not changed.

Competition between government departments.

One policy-maker respondent identified a traditional hierarchy in the Scottish Office concerning matters of land use, with agriculture at the top and nature conservation at the bottom. Agricultural interests were perceived to have been gradually imposed upon by forestry and nature conservation. SOAFD staff were seen to be facing a new situation with more equal footing with the leaders of SOEnD and the UK Forestry Authorities. In support of this, policy-maker respondents from environmental and conservation groups and SNH perceived the leaders of SOAFD to be more in a discussive mode, although there was still perceived to be some difficulty in getting SOAFD to consult with a sense of equality rather than superiority.

"There is a blurring at the edges about land use policy in government departments. There are different considerations about how land should be maintained" (Policy-making respondent, 1993).

Although there was a recognition of moderate change to this status quo it does reflect the geography of the government departments which treats agriculture and environmental interests as separate issues. In having the Secretary of State for Scotland as an umbrella minister over all departments in the Scottish Office, Scotland was noted as having an advantage over England. MAFF and SOAFD were seen to have a strong relationship with SOAFD as a minority. MAFF represented Scottish farming interests at the EU.

6.10.4 Balance of power between competing interests

Policy-maker respondents were asked, *"What do you perceive the trend to be for the balance of power between conservation and agriculture interest groups?"*.

Just over half of the policy-making respondents thought the balance still went in favour of agriculture and landowning interests (9/14). The remaining respondents either thought the situation was balanced (1/14), that it was simplistic to view the situation as entirely adversarial (2/14), or finally, that the situation was too complex to see a balance (2/14).

The NFUS and SLF respondents identified scope for the development of the common ground and a partnership between agriculture, landowning and conservation.

"There is a clear development of conservation consciousness which is not necessarily at the expense of farming and we could use common ground. It is possibly an erroneous approach to view this is an entirely adversarial situation. Land use policy has to be one of co-operation. We regard farmers as central to the rural economy but respect other land user's needs and aspirations so long as these do not seriously compromise agriculture's pivotal role" (Policy-maker respondent, 1993).

How far the common ground was developed was seen to be determined by factors which generate uncertainty about the future of support to the agriculture industry in the UK.

These factors include: the recent changes in CAP (*"the fall in CAP subsidies makes people nervous"* Policy-maker respondent, 1993); the final outcome of GATT negotiations; world agricultural market prices; public opinion on support to agriculture and conservation issues; the extent of opening up of Eastern European markets and resultant supply of relatively cheap food; and, the extent of the UK governments response to the Rio Summit.

6.10.5 Accessibility and receptiveness of government departments to interest groups.

Policy-maker respondents were asked which government departments they perceived to be receptive and accessible to interest groups.

According to the department and the interest being represented, the receptiveness and accessibility of government departments to interest groups was perceived to vary. All departments were perceived to be fairly accessible but the traditional relationships of consultation between the agriculture department (SOAFD) and the NFUS and a parallel practice of consultation between the relatively new environment department (SOEnD) and a select few environmental and conservation interest groups (WWF and RSPB) were thought to continue. Some bridging did operate between the two but the NFUS was said not to go direct to SOEnD; SOAFD was not considered to be as receptive to environmental groups as SOEnD.

"Different departments are receptive in different ways. SOEnD is good at listening to conservation groups and takes groups views to ministers. SOAFD however, though getting better, still tends to listen to the NFUS" (Policy-maker respondent, 1993).

SOEnD and SNH both commented that although there were consultative relations between their organisations and the environmental and conservation NGOs, *"they come to us more than us to them. We have a standard consultation list which includes all groups and if a consultation paper is issued we let them know. But if an issue is of importance they will come to us"* (SOEnD policy-maker respondent, 1993).

With respect to SNH (the independent government agency for nature conservation) an element of change was identified following the reorganisation of NCC (SNH). *"We do consult one another and discuss common areas. NCC in Scotland used to shun all voluntary bodies except SWT. SNH is far more open"* (SNH policy-maker respondent, 1993).⁴

SNH generally only worked with SWT, the RSPB and FWAG(S). Their relationship with the RSPB was described as being complementary with a close dialogue whereas, though the SWT have regular dialogue with SNH, SWT tended to be more dependent on SNH for funding. SNH was also a major funder of FWAG(S). SNH had a close relationship with SLF because of SLF landowning members and SNH also had a less close association with FoE(S) and the NFUS.

The **House of Lords** was deemed to be more accessible to interest groups than the Commons mainly due to the fact that most Scottish Tory MPs were ministers and were too busy for consultation. For the SLF, because of the presence of Scottish landowners in the House, their interests were represented by default. Members of Parliament tended to be targeted as the local representative over particular issues rather than a focus for more general lobbying.

At a **European level** the Parliament (MEP's) and the Commission were perceived to be very receptive to conservation and agriculture. The closest links lay between DG11 and the RSPB, WWF, FoE(UK) and many other environmental and conservation interest groups. The NFU was perceived to be becoming more involved but that they did not regularly participate in [EU] public meetings (of the Environment Select Committee) attended by the RSPB, WWF, Greenpeace, FoE(UK), chemical and pharmaceutical industries.

Therefore to sum up, the main target arenas for interest groups were, civil servants, House of Lords and the European Union.

⁴A degree of NGO funding was a legal requirement of SNH as set out in Section 5 of the Natural Heritage Scotland Act (Resource Funding) 1991.

6.10.6 Summary of main results in Section 6.10

Competition between conservation/environmental groups tended to be at policy-making centres from the Scottish level in Edinburgh upwards, in order for the interest groups to secure resources. Competition between conservation groups was not perceived to occur as much at local grassroots level for membership recruitment. There were more environmental and conservation groups than agriculture or landowning groups at each policy community (Table 6.20). As a result a more developed network and more competition for resources existed between conservation and environmental groups. There were two main policy communities: the Scottish Office and Westminster, with the former being considerably smaller.

Agricultural and landowning groups had a monopoly over the representation of their respective interests and thus prevented entrance of smaller groups into the political market. This meant there was little, if any, competition among farming or landowning interests. Furthermore, groups representative of land and farming interests in Scotland have not been as exposed to the elements of competition from conservation and environmental interests to the same degree as in England.

The general trend of perceived convergence between the two main interests reflected a professionalisation on the part of the environmental/conservation groups and a recognition of the importance of the public on the part of the land groups rather than any real convergence in their poles of interests.

Competition between conservation and agriculture interests in government departments also existed and a new balance was being sought by conservation interests groups.

The overall perception was that the private economic interests of farmers were still very much the determining ground with public interest conservation and environmental groups making some inroads to decision-making but not impacting the core. One important point to note was that no conservation groups' respondents suggested the non-adversarial or partnership approach. This was an approach advocated by farming interests and politicians only.

6.11 External influences: the media, public opinion and the EU.

In order to determine whether or not there were other external influences on policy-making, policy-maker respondents were asked how influential they perceived public opinion, the media and the European Union to be.

6.11.1 Public opinion and the media

The indirect impact of public opinion has already been demonstrated through the influence of key interest groups who rely on public membership for their continuing influence. The degree to which public opinion and the media were important to policy-makers was further explored by the following two questions,

"How important do you think TV and newspapers are in influencing policy-makers decision-making?"

"How important do you think public opinion is in influencing policy-makers decision-making?"

Local organisations (n=8)

Public opinion was perceived to be *'Very'*, *'Quite important'* or *'Important'* to policy-makers by 7/8 local organisation respondents. The remaining 1/8 perceived it to be *'Unimportant'* and was qualified by the following quotation,

"Public opinion isn't very important. Politicians only listen to pressure groups, not people" (Local organisation respondent, 1993).

However, only 1/8 of local organisations perceived TV and newspapers to be unimportant in influencing policy-makers, with the majority of 7/8 respondents perceiving them to be *'Very'* or *'Quite important'*. This was reflected in the following statement,

"Agriculture is becoming more and more dependent upon government and taxpayers. TV is a powerful media and we're aware of that in farming. Most governments are oblivious to public opinion" (Local organisation respondent, 1993).

Policy-maker respondents:

Importance of public opinion (n=12)

Public opinion was perceived by policy-maker respondents to be 'Very important' (8/12) or 'Quite important' 3/12) to policy-makers. The re-organisation of the NCC (seen to partially be a result of public pressure) was offered as an example of the recognition by policy-makers of the strength of public opinion.

The influence of public opinion was qualified by two respondents:

"Only influential when public opinion is sufficiently vocal and massive to make its influence felt. Government will act if it feels it has to."

1/12 respondents perceived public opinion to have no influence over policy-makers. This opinion was further explained by the respondent in the following quotation,

"Public opinion tends to be more diffuse than lobby groups" (Policy-maker respondent, 1993).

Importance of TV and newspapers (n=12)

The majority of policy-maker respondents perceived TV and newspapers to be 'Very important' (6/12) or 'Quite important' (5/12). This opinion is reflected in the following quotations,

"[TV and Newspapers are] very important at the political level as politicians can be very sensitive to what the papers say although a lot of policy is developed without press attention so press is reactive rather than creative" (Policy-maker respondent, 1993).

"On an issue like this the media is an instrument of persuasion from the interest group" (Policy-maker respondent, 1993).

"The efforts with the press are aimed at the quality end because those are the ones civil servants read" (Policy-maker respondent, 1993).

1/12 respondents perceived TV and newspapers to have no influence over policy-makers. This final response was qualified by the following quotation,

"Civil servants are sceptics and are not easily influenced by rhetoric in the media which is of questionable value. If a full time environmental correspondent says something and creates an undercurrent it won't influence ministers directly."

Wildlife programmes have no effect and probably only divert attention from real issues. Politicians are good at focusing on non-contentious issues away from transport and energy etc. It depends on how well informed journalists are and how capable they are of arousing the public. Reporters skip from one issue to another so there is no depth. But there are some good environmental correspondents emerging" (Policy-maker respondent, 1993).

If an issue looked like becoming contentious and a threat with momentum, for example oil pollution and transport issues, the media latched onto the issue and stimulated growing public concern. The type of coverage SSSIs tended to receive concerned the costs of the management agreements or a specific site under conflict (for example, when a landowner such as John Cameron received a large compensatory payment or a site such as Loch Leven was under threat). On a local level the Orcadian had almost weekly coverage of NCC versus farmers disputes over the issues described above. In 1983 there were 7 articles. This peaked at 35 in 1984 and 15 in 1985.

The view of the Scottish Office Environment Department to public opinion was summed up in the following quote.

"Public opinion does not change policy. There are bursts of correspondence from the public which don't take long to give them a satisfactory response" (SOEnD policy-maker respondent, 1993).

To conclude therefore, public opinion is considered to be crisis driven and influenced by the local and national press. The greening of politics is perceived to be a result of awareness of public opinion which indicates how vote-driven politicians are. There is a role for public opinion expressed in the media in influencing decision-makers but it cannot be said to be consistently effective.

6.11.2 The European dimension

Policy-maker respondents were asked how important they perceived the European Union to be in terms of UK policy-making and what the anticipated impact of the 1995 Species and Habitats Directive would be.

Importance of the EU (n=11)

8/11 policy-maker respondents considered the importance of the EU to be *'Very significant'*.

"The framework for policy is determined at the international level with building blocks down to the member states" (Policy-maker respondent, 1993).

The remaining respondents were evenly divided between the importance of the EU being *'Quite significant'* (1/11), *'Increasingly significant'* (1/11) and *'Can be, it varies issue by issue'* (1/11).

Impact of the Species and Habitat Directive (n=11)

The majority of policy-maker respondents (7/11) considered the impact of the Directive to be *'Very significant'*.

"It will have an enormous impact and it is receiving a lot of government attention. There exists a moral and legal commitment by government to do everything to implement Directives. Government works hard to do everything to minimise its impact but once the directive is passed there will be a determination by government to do everything to implement it" (SNH policy-maker respondent, 1993).

However, within this 2/11 though recognising the significant impact of the Directive were less encouraging:

"Potentially problematical" (Policy-maker respondent, 1993).

"We already have the SSSI system and this is yet another thing. Is it necessary in this country? It will stir up antagonism just as SNH are trying to sort things out" (Policy-maker respondent, 1993).

The remaining 4/11 respondents perceived the impact to be *'Quite significant'*.

The EU was seen to be influential in that it laid down directives, but the interpretation and actual structures within the directives framework were seen to be determined within the member countries. Therefore, there was considerable freedom in member country interpretation of directives.

Presently, nature conservation regulation tends to be driven by the international scene under the influence of conservation and environmental interest groups. For example, the EU Birds directive resulted in the Wildlife and Countryside Act (1981) and the

EU Species and Habitats directive will require Special Areas of Conservation to be selected.

While the European Union was recognised as being very influential, the above critique is brief as there was not the scope or resources within the boundary of this investigation to explore European influence in more detail.

6.11.3 Summary of main results in Section 6.11

Public opinion and the EU are considered to be influential at all levels of the policy arena: grassroots; Scottish Office; Westminster; EU; International. Public opinion was identified as being expressed in two forms: either the mass public opinion expressed through the media or a more focussed expression through interest groups such as the NFU or the RSPB.

Public opinion and the media are important determinants of public policy to a variable extent and this variation is dependent on the issue. Though many farming respondents did not know a great deal about policy issues they generally all relied on the media to remain 'in touch'.

The EU is perceived to be a growing influence by policy-making respondents and more of an influence than many policy-makers recognise.

Part 3: the nature of policy-making and the role of government

The following discussion focusses on the reform of the Wildlife and Countryside Act (1981) included in the 1990 Environment Protection Act based on responses from the Policy-maker survey. As described in Chapter Two, the NCC was reorganised into three country agencies for England, Wales and Scotland. The reform transferred decisions over nature conservation in Scotland from the NCC head quarters in Peterborough, England to SNH in Edinburgh. This section explores the competition of interests, the range of motivations, role of the government, external influences and the overall nature of decision-making through a subjective appraisal of policy-maker respondents perceptions of reform of the regulation. Analysis was divided into two main areas: the actual reform of the legislation, and the policy status quo following reform. Respondents were asked a range of open-ended questions. The results are an amalgamation and interpretation of information from all the respondents of the policy-maker survey. Individual quotes are in italics and references are made to public organisations but individuals names are not printed as agreed in interviews.

6.12 1990 Reform of the Wildlife and Countryside Act (1981)

6.12.1 Re-organisation of the NCC

The two opening quotes below were characteristic of views pertaining to the reorganisation of the NCC.

"Attempting to pin the reorganisation on the antics of Peterborough and the Flow Country is too simplistic.....You never entirely know what goes through ministers minds. It is probably best to see [the reorganisation] as a range of circumstances which occurred at one time. It is an unclear story because it is hard to unpick the various conspiracies involved" (SNH policy-maker respondent, 1993).

"There existed a long-running unease although even some of the most politically aware in Edinburgh did not anticipate the change" (JNCC policy-maker respondent, 1993).

There were several key findings relevant to this investigation:

- Government ministers were central to the reform;
- the reasons for change were not explicit; and,

- there were various long-running arguments across several arenas which built up pressure for change and contributed to the final decision to reform existing legislation.

From these key findings three issues related to the alternative paradigm were addressed. 'What prompted the change bearing in mind the dispute had already gone on for a long time?' 'What was the focus for debate (which issues)? and 'across which arenas did the debate occur?'

6.12.2 The push for change.

The push for change came from two main fraternities: (i) the DoE minister Nicholas Ridley; and (ii) the landowning fraternity, by way of a few particular individuals (Lord Pearson, Lord Rannoch, Lady Saltoun) and later in the proceedings, the SLF and NFUS.

A very important issue at the time was the resource costs to the DoE of NCC management agreements with Scottish landowners. There were a few substantial payouts which highlighted the issue of Scotland paying for its own nature conservation.

Furthermore, there was a long-running debate about the role of nature conservation in Scotland and the relationship between the NCC and the Scottish Office (SO). The NCC was an English-based organisation and the SO wanted decision-making in Scotland⁵ for a number of reasons as described below.

Nature conservation was the only area of rural activity excluded from the SO. This made integration and delivery of rural policy difficult. In addition, Peterborough was considered to have too much influence,

"Bearded weirdo's in Peterborough were dictating nature conservation to Scotland. Everything came from Peterborough and that caused contempt" (Policy-maker respondent, 1993).

⁵ There were also some identifiable moves for change from the SO who were perceived to already have a contingency plan for reorganisation which had been prepared two years previously (although it was not the model finally used).

The SO was perceived by one respondent to be strongly territorial and the head office of the NCC in Scotland was, at times, not sure from whom it should take leadership - the SO or the NCC in Peterborough.

There was widespread discontent with NCC particularly from the landowning and farming lobbies, but also environmental and conservation lobbies. This discontent is explained in the following quotation from a policy-maker respondent.

*"There had always been considerable dissatisfaction with the NCC in Scotland because it didn't meet needs." "[The NCC had] too few under trained staff and they also had to implement the Wildlife and Countryside Act (1981) in a hurry. Things were not **for** them and being a scientific remit they didn't have a balanced view"* (Policy-maker respondent, 1993).

Furthermore, the fact that the NCC was a distant English bureaucracy meant it was difficult to sell conservation ideas to the Scottish people. There had been damaging confrontations in the Highlands and Islands (Caithness, Islay, Cairngorms and Orkney, NCC, 1984b).

6.12.3 Side issues of the time.

Additional issues were perceived to have contributed to the push for policy reform:

- There was dissatisfaction with the Countryside Commission for Scotland which was considered by many to be too vocal and ineffective.
- The forestry issue needed specific attention within Scotland and was a separate issue from nature conservation in England (NCC, 1984b).
- DoE wanted to breakup the closeness of the NCC in Peterborough with the RSPB headquarters nearby in Bedfordshire. There were also perceptions in the NCC in Scotland that the government organisation of the NCC was becoming an arm of the RSPB rather than being its own organisation.
- In Peterborough they were developing a federal model to enhance local decision-making so the need for more local input had already been recognised.
- There was a strong devolution for Scotland debate running at the time.

The above discussion illustrates the political and economic complexity of the policy debate. In addition to the long build up of pressure, the catalyst for change is identified as (i) the costs of the regulation followed by (ii) pressure by key individuals and interest groups. The political aspects of policy range from the implementation of policy at the local level to national, inter-departmental competition over decision making. The number of arenas of debate and influence lead the discussion into the next section on the main decision-makers involved.

6.12.4 The main decision-makers involved.

Policy-maker respondents were asked,

"Please rank the following main arenas of policy-making in terms of influence with respect to the 1990 reorganisation of the NCC":

1. Government departments
2. Political parties
3. House of Commons
4. House of Lords
5. Interest groups
6. Public arena (media, public opinion)
7. International arena
8. European Union

While the issue was very complex and it is recognised that the various arenas involved in the push for re-organisation do not easily lend themselves to simplistic ranking, the responses of policy-makers allow a general pattern of ranking which orders agents in the following way.

1. Government ministers (DoE - Nicholas Ridley and Scottish Office - Malcolm Rifkind) and a civil servant (Scottish Office, Natural Heritage Division- Roger Crofts)
2. Peers in the House of Lords (Pearson, Rannoch and Lady Saltoun)
3. Interest groups (SLF, NFUS)
4. Public opinion

The remaining decision-making arenas were perceived as influential to varying degrees although they had little impact on this particular case of public policy reform) and can be approximately ranked as the EU, the international political arena, non-ministerial politicians in the House of Commons and political parties.

6.12.5 Support for the reorganisation

The higher echelons of the NCC in Scotland supported the reorganisation. However, Scottish environmental and conservation interest groups views were divided at the time. Many feared the reorganisation would result in a reduction in nature conservation as it would be more open to the influence of local landowning and farming interests. In contrast to this were groups who supported the move towards greater autonomy over decisions with respect to nature conservation policy in Scotland.

The English and UK based environmental and conservation bodies were perceived by several respondents to have been against the reorganisation. As nature conservation would come under the power of the Scottish establishment they felt they would lose what indirect control they had over Scottish nature conservation through the DoE.

6.12.6 Summary of main results in Section 6.12

There were a number of arenas perceived by respondents to be integral to reform and these included the government at Westminster; government at the Scottish Office; farming interests in Scotland; landowning interests in Scotland; environmental and conservation interests - UK outwith Scotland, English and Scottish interest groups.

The key arenas of influence in this instance were: (i) government ministers; (ii) the Lords; (iii) farming and landowning interest groups (environmental and conservation group's influence was retrospective once the reform was under way as opposed to their being invited to comment and consult on reform proposals as were the farming/landowning groups). There was no conservation or environmental group discussion and these groups entered the debate later. The overall costs of policy were the catalyst to policy reform although the long-running arguments had also highlighted political difficulties. Public opinion expressed through farming groups is influential. Reform was not coherent or part of an obvious overall strategy, but rather used to solve one instance of high transaction costs and political controversy.

6.13 Policy status quo following reform

The final discussion broadens the focus of analysis of public policy from the 1990 NCC reform to examine the status quo thereafter and the perceptions of respondents as to determinants of budget allocation in nature conservation. The comprehensiveness of nature conservation regulation, the need for reform and the constraints to reform were also examined.

6.13.1 Devolution of SNH decision-making

Policy-maker respondents perceptions of the extent of devolution of SNH decision-making (n=13)

8/13 policy-maker respondents considered the establishment of SNH to have resulted in devolution of decision-making from NCC head office to the SNH regions and area offices.

"SNH is preaching the message of partnership right the way through the organisation. This has reinforced the devolution resulting in a significant presence throughout Scotland. There is no 'Edinburgh effect' and we're prepared to talk to people and go out of our way" (SNH policy-maker respondent, 1993).

"[There was perceived to be a] limited Edinburgh effect by the creation of regional boards. It was a shrewd move to get interaction in the regions. It works well but it does create another bureaucratic layer within SNH and slows things down" (Policy-maker respondent, 1993).

"This devolution is very important. What happens in the Lammermuirs will not necessarily work in Sutherland. We need to match local decisions. Locals need to feel the matter comes from closer to home which is better than Edinburgh or Westminster or Europe" (Policy-maker respondent, 1993).

"Re-organisation has given us the opportunity to start positive management agreements and implement the voluntary ethos. It was almost a natural consequence following the big rush of management agreements. Government was also beginning to get unhappy about the level of some agreements especially where the forestry issue was included. Glen Lochay was a watershed case" (SNH policy-maker respondent, 1993).

3/13 perceived there to be no devolution *"not in terms of real power"* and the remaining 2/13 responded *'Don't know'*.

6.13.2 Budget allocation

Budget allocation or what is known as 'Grant-in-aid' to SNH is formally determined within a framework as described in Chapter Two. Respondents were asked what they perceive to be the main determinants of budget allocation to nature conservation by the Treasury (via the DoE): *"How does Treasury allocate budget for nature conservation?"*.

Results showed that policy-maker respondents perceived there to be non-economic determinants of budget allocation in addition to formal economic determinants. This supports the view held by Spash and Simpson (1994. See Chapter Two) that decisions are not simply and rationally based on the costs of nature conservation which are in turn dependent on predetermined scientific objectives for nature conservation policy. Determinants were as follows:

- 4/11 policy-maker respondents thought **public opinion**, which is in turn determined by the level of controversy and public profile of an issue;

"The main factor is how will a government minister have a quiet life. If an issue gets a high profile and public commitment then it will receive more money" (Policy-maker respondent, 1993).

"The Treasury allocates the whole budget on political expediency and the loudest voice at the time. The time frame is as short as possible to allow maximum room for manoeuvre" (Policy-maker respondent, 1993).

- 3/11 respondents thought the main determinant was to **minimise public spending**; *"During the 1980s, the budget was fairly demand-led and increases year on year. Yes, of course there are limitations (there always are)"* (Policy-maker respondent, 1993).

"Because SNH is a creation of the government they have to make it work. So for the first few years they gave a good budget and it may tail off. The implications of the Species and Habitats directive are only just coming home to government and we may need extra funds to meet extra costs. If we don't get a larger budget we may have to cut back on innovative work. The directive may just end up refocussing us on sites. The Species and Habitats Directive and the Wildlife and Countryside Act (1981) are geared towards site protection and over the long-run there are more fundamental changes needed, for example, sustainability" (SNH policy-maker respondent, 1993).

- 1/11 respondents considered the general **economic climate** to be the main determinant of budget allocation.

The remaining 3/11 did not know what the determinants were of Treasury budget allocation for nature conservation.

There was also perceived by several respondents to be a tradition of competition among departments for Treasury resources which constrains budget allocation to any department (this perception is supported by Heclo and Wildavsky, 1977).

The above elements are proposed determinants of budget allocation to the DoE, and hence, grant-in-aid to SNH. This also stands now for budget allocation to the Secretary of State for Scotland and the Secretary's allocation to SNH.

The following quotation summarises the main determinants of budget allocation as perceived by respondents,

"There are two key forces: the drive to spend as little as possible and public rhetoric on spending" (Policy-maker respondent, 1993).

Therefore the main determinants of grant-in-aid to SNH are the costs of nature conservation 'policy' and the priority of nature conservation and protection of the wider environment in the Treasury and the Secretary of State for Scotland's decision-making.

6.13.3 Comprehensive Nature Conservation Regulation

The following discussion seeks to establish how comprehensive policy-making respondents considered existing nature conservation regulation to be and what needs and constraints existed for any necessary reform. This relates to (i) the outcome of competition of interests, (ii) the dynamic nature of policy-making and (iii) the irrelevance of the neo-classical concept of an equilibrium outcome.

Policy-maker respondents were asked whether they agreed or disagreed with the following statement,

"The UK government does not have a comprehensive nature conservation policy".

Policy-maker (n=15)

Two thirds (10/15) of policy-making respondents perceived the framework for existing nature conservation regulation to be 'comprehensive'. SSSIs, the EU Species and Habitat Directive, the UK government signing at Rio (which required nature conservation to be incorporated into sectoral plans - transport, energy etc.), and the

fact that there are 'green ministers'⁶ in every government department were cited as examples. One third of the respondents perceived the only constraint to comprehensiveness, in terms of actual implementation, to be the limited budgetary commitment by the government.

The remaining 5/15 perceived the legislation itself not to be comprehensive enough. A variety of reasons were cited including the lack of scientific knowledge of civil servants and ministers, the reluctance to confront industry on pollution matters and the focus on site protection rather than adopting a more comprehensive ideology of sustainability.

"It is not comprehensive because there is no regime for below the low water mark and no safeguarding of the wider countryside. We are still driving down the site protection route. Not much time has been freed from the notification of SSSIs" (SNH, 1993).

That policy is not perceived to be comprehensive overall (in terms of framework and budget allocation) illustrates that the outcome of the competition of interests and the policy-making process should not be seen as an equilibrium in which all interests reduce their pressure for change. The need for reform has been clearly identified by several policy-maker respondents. This ongoing assessment by respondents of the legislative and financial framework of policy illustrates the dynamic nature of policy-making.

⁶ In recognising the all-pervasive nature of environmental problems in 1990 the government decided to 'name' a 'green' minister in each government department who is responsible for ensuring environmental standards are met within his or her department.

6.13.4 Need for Reform

Following the above section on the comprehensiveness of legislation, respondents were asked what reform, if any, they would like to see.

Policy-maker (n=15)

13/15 of all respondents perceived a need for reform of legislation.

Of these, 2 respondents identified **marine issues** to be an area requiring further legislative attention and 7/15 sought legislative provisions for the **wider countryside**.

The remaining 2/15 respondents did not perceive the need for reform of existing legislation and this was qualified by one respondent,

"It is early days [following the 1990 reform]. The concern has been that the scientific designation is given with no economic thoughts. The Bill now has a balancing act [which is] the best outcome possible" (Policy-maker respondent, 1993).

These results provide an illustrative example of the difference between conservation and farming interests. The farming lobby seeks better justification of designation and the conservation groups seek to improve mechanisms to more adequately meet conservation objectives. Many respondents at all levels identified scope for further reform and with this in mind the outcome of policy reform can not be described as an equilibrium. Generally government policy is in a state of perpetual change. Optimal solutions are a theoretical abstract and the reality of the outcome of competition among interests to influence government policy is one of satisficing.

6.13.5 Constraints to Reform

The final question in this section sought to establish respondents' perceptions of the constraints to successful policy reform.

Policy-maker (n=12)

The following were identified by respondents as constraints to the reform of existing policy:

- **Cost** (3/12);
- **Political will**, which is dependent on public pressure, in turn dependent on public understanding. The 'Not In My Back Yard' (NIMBY) syndrome is a significant factor in public pressure. People will conserve nature as long as their own jobs are not under threat. *"The real problem is getting people to realise the value of non-marketable benefits and costs. Reform means changing consumption patterns and agriculture policies and transport policies. The biggest problem is the complexity and long termism"*(SNH policy-maker respondent, 1993).

There is not enough political pressure in Scotland or even in the South East of England because of the reasons mentioned previously with respect to low environmental group membership and mainly that there are other economic issues with priority; and, the fact that the government is reactive to public opinion (as discussed in 6.13.6) means it is difficult to see where reform would come from (3/12);

- House of Lords and their **vested interests** in land (2/12);
- **Ideology**. It is against the present governments ethos to be regulatory (1/12);
- The **recent passing of the Heritage Bill**. That is, there has just been some reform and any new reform will not be for sometime yet; (1/12)

The remaining responses included '*No reform*' (1/12) and '*No response*' (1/12).

To sum up, constraints are a combination of **cost** and **political will** (of decision-makers and the public at large) and **dominant interests**.

6.13.6 Role of the government

All policy-making respondents were asked if they perceived the UK government to be reactive or proactive to policy changes.

Policy-maker (n=12)

9/12 of policy-maker respondents perceived the government to be reactive to policy changes. This was reflected in the following quotation,

"The UK government is reactive and the EU is more proactive. Nature conservation tends to be driven by the international scene under the influence of pressure groups. The framework is determined by the international level with building blocks down to member states (if they want to call it policy-making that's nice but its not really)" (Policy-maker respondent, 1993).

"Reactive, particularly so in this government. Policy is often determined by the economic climate - this government is very much against regulation. The EU is proactive because they are not elected. Some say too proactive and act before the public is ready to accept change. The EU relies very much on regulation and this government is anti it" (Policy-maker respondent, 1993).

1/12 respondents perceived the government to have its own agenda (proactive) and this was illustrated in the following quote:

"As the Thatcher years continued there was more and more dogma and less listening to other arenas. In 1981 there was lots of consultation although the initial drafting was very bad technically. The 1990 Environmental Act was very much a pollution Act and they only slipped in reorganisation. The government put it in not expecting it to be controversial. The big difference between 1981 and 1990 was the attention paid to pressure groups" (Policy-maker respondent, 1993).

2/12 policy-maker respondents replied 'Don't know'.

6.13.7 Summary of main results in Section 6.13

Overall the government was seen to be reactive to needs of policy change or to changes in public opinion. However, many respondents did report that in the instance of NCC reform government was seen as having its own agenda and therefore to be

proactive. The outcome of policy reform was not seen to be an equilibrium as the majority of respondents perceived the need for change. Costs and political will were seen to be the principal determinants of policy, and therefore, also the main constraints to reform. Other constraints included vested interests, government ideology and the governments generally reactive stance to policy reform.

7 Validation of the alternative paradigm

7.1 Introduction

The principle aim of this study was to identify the determinants of the UK government's economic policy in relation to the conservation of natural habitats.

From this aim the following two propositions have been established:

1. *policy is determined by government decision-makers on the basis of competition between agriculture/landowning and environmental/conservation interests;*
2. *property rights and the claims to benefit streams provide the focus for competition between agriculture and landowning, and environmental and conservation interests.*

These hypotheses were investigated earlier (Chapter 3) through an evaluation of the role of Public Choice theory as a theoretical framework for the development of economic policies for conservation of habitat and through the construction of an alternative paradigm (Chapter 4) developed from a critique of Becker's '*A Theory of Competition Among Interest Groups for Political Influence*' (1983). This alternative paradigm was empirically tested through a survey of farmers, local organisations and policy-makers (Chapters 5 and 6).

This chapter consists of a summary and validation of the alternative paradigm. On the basis of this analysis the implications for future development of conservation policies are identified. These are presented in the final chapter (Chapter 8) with suggestions for avenues for future research.

7.2 Summary of the alternative paradigm.

The alternative paradigm, presented in Chapter Four was constructed on the basis of a critique of '*A Theory of Competition Among Interest Groups for Political Influence*' (Becker, 1983). This paradigm comprises four principle elements: the methodological approach; the interests of individuals; the nature of competition; and the nature of policy-making and the role of government.

Methodology

The methodological approach adopted in the development of the alternative paradigm was essentially multidisciplinary and non-mathematical. This had the effect of broadening the scope of analysis by avoiding the restrictive assumptions associated with neo-classical economic theory, and thereby enabling the complexity of political decision-making to be addressed. The approach employed both quantitative and qualitative data to allow a more complete empirical analysis of the alternative paradigm.

Individual interests and the nature of competition

In addition to government policy-makers, private (landowning and agriculture) and public (conservation and environmental) interest groups were assumed to be the central players in the decision-making process. The conflict between these interest groups is principally one of property rights distribution, and it is this that provides the groups with the motivation to prescribe policy reforms. By using their influence over the decision-making process, the interest groups essentially compete with each other for the adoption of their particular desired policy direction. Each group seeks to maintain or promote the benefit streams of its members, with property rights assumed to be redefined and allocated through the political market.

Influence is assumed to be determined by expenditure of time and money on exerting political pressure; for example through campaigns, political advertising and maintaining a large membership and income. Formal and informal networks are perceived to be of particular importance in the generation and exchange of information. Absolute influence is assumed to be constrained by the prevailing social ideology.

Nature of policy-making and the role of government

In addition to interest groups, important sources of influence include civil servants, government ministers and external influences, such as the EU and public opinion. Therefore, influences on the policy-making process were deemed to be multidimensional, and because of the networks of information exchange, interconnected. Because government is an interested player (i.e. not neutral) the influence of civil servants and/or ministers may reflect a government agenda. The outcome of competition is not assumed to be an 'optimum equilibrium outcome' (Becker 1983) but rather a disequilibrium outcome characterised by the satisficing of various agents interests which, with time, reform policy in an iterative and fragmented manner.

7.3 Validation of the alternative paradigm

The four principal themes of the alternative paradigm provided the framework for the survey described in Chapter Five. The results of this survey were presented in Chapter Six; the following discussion analyses these results in relation to the alternative paradigm.

7.3.1 Interests of individuals

The alternative paradigm relies upon the assumption that human behaviour is not necessarily driven by rent-seeking behaviour, but is rather the consequence of a diverse range of interests. In support of this there were shown to be three dimensions to farmer attitudes to SSSI designations: economic, property rights, and socio-political. Further illustrating the complexity of individual interests, it was evident from the survey that all three categories were considered by the respondents as important factors in policy implementation (Chapter 6, Sections 6.1-6.4).

The focus of local conflict was shown to be: (i) the loss of control over individual farmer's decision-making (i.e. the loss in control over benefits streams from land); and, (ii) the way in which policies were implemented (i.e. the management of farmers). While the perceived negative economic impact of designation was shown to be a significant concern, the actual economic impact was minimal. There were no beneficial aspects of SSSI designations according to the majority of farmers although one possible benefit identified by many respondents was the potential increase in

income. There was no identifiable impact of SSSIs on respondents farming interests, and farmers were no more likely to be a member of a conservation group or to do conservation work on their farms had they had an SSSI designated on their land.

A divergence in compensation levels between the early 1980s and 1993 was identified. The perception of relatively lower levels of compensation (in 1993 than in the early 1980s) in Orkney indicated farmers had developed greater understanding of the aims, objectives, and impacts of SSSI designations. This, combined with an increase in SNH (NCC) influence, resulted in more standardised compensation payments. The contemporary threat to private property rights (and hence landowners and occupiers benefits streams) by SSSI designations has been significantly reduced following this increase in understanding. According to the survey, farmer respondents generally had a good understanding of the purpose of SSSIs, and their attitude to the idea of designating areas for nature conservation was positive, illustrating their recognition of the importance of nature conservation.

It was clear from the survey that non-SSSI respondents, having had little contact with SSSI regulation had a negative perception of the legal or regulation approach to nature conservation policy. The voluntary approach was seen to work by the majority of all respondents, provided it received adequate financial support. Overall, the majority of farmer respondents recognised the value and necessity of a mixed system of regulation and voluntary policies.

When asked about future policy options the voluntary approach supported by regular payments was seen as having considerable merit. In reference to planning controls over farming, the majority of respondents gave a negative response indicating that they felt they had already lost a considerable amount of freedom with regard to decision-making on their farms (Chapter 6, Section 6.5).

This later point was further emphasised when respondents identified a range of factors attracting them to farming including non-monetary benefits such as *'Being your own boss'*. This reinforced the high value placed by farmers on their individual freedom over decision-making. It was widely acknowledged by the respondents that while they were in farming for the freedom of being self-employed and the benefits of working and living in the countryside, they could not meet these objectives without a reasonable income. It was evident that the respondents were receptive to conservation, and recognised its value, but felt they did not have either the time or

financial resources to pursue those interests. Therefore, while maximising income was not an objective in itself for the majority, maintaining a reasonable income in order to pursue other non-monetary objectives was an important factor in running a farm (Chapter 6, Section 6.6).

From the diversity of responses to the survey it is evident that the interests of farmers are more complex than those attributed to 'rational economic man'. Although all respondents were shown to be pursuing their self-interest, these were shown to be multi-dimensional with rent-seeking behaviour a less dominant characteristic.

7.3.2 Representation of interests

This section explores how the interests of farmers and landowners combined with conservation and environmental concerns are represented in policy arenas. The discussion offers an empirical illustration of how local farming interests are translated from the local grassroots arena to the various tiers of policy-making. For the purpose of this analysis individuals are assumed to express their economic, social or conservation and environmental interests in the form of membership of a related group, which then competes with other groups to promote the interests they represent.

At the time of the survey there were only a small number of interest groups with offices in Orkney, including the NFUS, RSPB, FWAG(S) and Orkney Field Club. Only the NFUS and RSPB were actively representing Orkney farming and conservation interests in policy arenas outside of Orkney. Membership of respondents was concentrated in the NFUS. The next most popular interest group was FWAG(S), with the remaining memberships distributed across an array of groups including SLF and several more politically marginal farming interests such as organic and sheep farming. Within the farmer sample, membership of conservation and environmental interest groups was low (Chapter 6, Section 6.6).

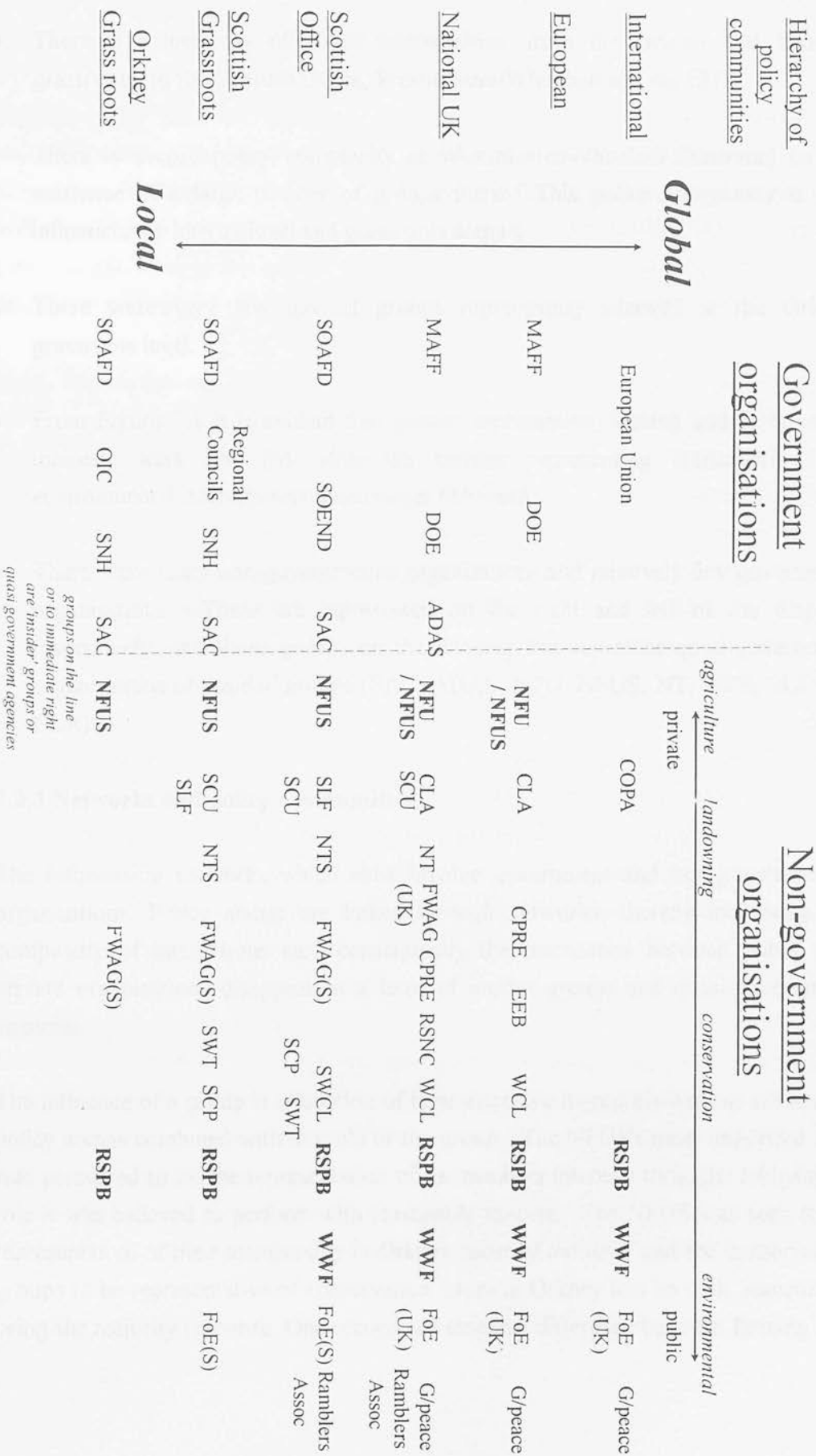
Generally local organisations keep in touch with the local community through an informal and ad hoc procedure (Chapter 6, Section 6.7). They then presented local Orkney interests to their head offices, who they depend upon to supply them with information of policy development. The RSPB and NFUS are more proactive in attaining policy information and used other contacts, including direct contact with a civil servant or MP. There were not generally seen to be any problems in voicing

Orkney's interests to Edinburgh head offices, but the expense of travel was recognised as a constraint.

Local organisations rely upon their head offices in Edinburgh to provide them with information and to represent their interests at higher tiers of policy-making. There is an extensive translation of local interests from Orkney grassroots to the main policy arenas. This is chiefly accomplished by public bodies (SOAFD, SNH, OIC), however the two main interest groups operating across all policy arenas were also the two main groups representing farming and conservation interests in Orkney (NFUS and RSPB).

It was important to make the distinction between groups having an office in Orkney and those just having a membership there. While there are very few interest groups with offices operating in Orkney there are significantly more groups with a degree of support in the Isles (i.e. a small membership in the Isles) that are based elsewhere in Scotland or outwith Scotland altogether.

Figure 7.1 diagrammatically illustrates the office location, membership or regular influence at each level of policy making and implementation of the various interest groups and public bodies associated with the research (Chapter 6, Sections 6.8 - 6.10).



The main points to note from Figure 7.1 are:

- There is a hierarchy of policy communities, from the Orkney and Scottish grassroots to the Scottish Office, Westminster/Whitehall and the EU.
- There is a core policy community at Westminster/Whitehall illustrated by the existence of a large number of groups there. This policy community is also influenced by international and grassroots arenas;
- There were very few interest groups representing interests at the Orkney grassroots level;
- From Figure 7.1 it is evident that groups representing farming and landowning interests were few (6) while the number representing conservation and environmental interests was much larger (16); and,
- There were many non-governmental organisations and relatively few government organisations. These are represented on the right and left of the diagram respectively; and those groups on the dividing line represent quasi-government organisations or 'insider' groups (SAC, ADAS, NFU, NFUS, NT, NTS, SLF and CLA).

7.3.3 Networks and policy communities

The information networks which exist involve government and non-governmental organisations. Policy arenas are linked through networks, thereby increasing the complexity of interactions etc.; consequently the boundaries between public and private organisations disappear in a haze of insider groups and quasi-government agencies.

The influence of a group is a function of how extensive its representations are across policy arenas combined with the role of the group. The NFUS's most important role was perceived to be the representation of its members interests through lobbying; a role it was believed to perform with reasonable success. The NFUS was seen to be representative of their membership in Orkney '*most of the time*' and the conservation groups to be representative of conservation issues in Orkney less so with '*sometimes*' being the majority response. One recognised essential difference between farming and

conservation interest groups is that the NFUS directly represent their local members interests while environmental and conservation groups represent a broader community of individuals seeking to promote the wider public interest.

Conflict arises when an attempt is made to redefine property rights through the political market. The NFUS seeks to maximise the benefits to its members, which although multi-dimensional, principally focus on maintaining freedom over decision-making with respect to benefit streams from their land, and to being able to maintain these benefit streams (incomes). This was in contrast to conservation groups who attempt to redistribute property rights and establish public access to benefit streams.

From the numerous tiers of policy-making and the high number and range of governmental and non-governmental organisations illustrated in Figure 7.1 it is evident that networks, based on information exchange exist. There are a small number of key interest groups which are important sources of information for all respondents, these being supplemented by a wider network of smaller interest groups. All organisations, government and non-government, generate information which fall into two broad categories: policy and technical. SAC and SOAFD are the key organisations for technical information, and SNH for policy information. The most extensive organisations, in terms of information generation across all survey respondents, were NFUS, SAC, SOAFD and SNH. For new ideas the most popular sources were: for farmer respondents, other farmers; for local organisations, head offices and other local organisations; and, for policy-makers, own research, journals and staff or members on the ground. Government departments were shown to be very important for the other players in policy-making. To remain informed about EU policy developments, numerous sources were identified but generally information tends to filter through government departments to the Scottish Office.

Conservation and environmental interest groups have a formal network at the Scottish Office policy-making level, known as Scottish Wildlife and Countryside Link (SWCL). There was also a formal network at the UK policy-making level known as the Wildlife and Countryside Link (WCL). Through regular meetings of SWCL and WCL there has been established a network between Scotland and the rest of the UK. The WCL also co-ordinates other national Link organisations so as to present a united UK conservation lobby in the EU policy arena.

Agriculture and landowning interests rely upon an informal network of communication. The fact that there are only two farming and landowning interest groups make it relatively easy for them to present a united front. The farming and landowning lobby do not participate formally with the LINK organisations in Scotland.

The existence of networks and key organisations in providing relevant and important information establishes the importance of government departments as well as interest groups. This provides strong evidence to support the view that policy elites do exist.

7.3.4 Influence

In the paradigm the determinants of influence were assumed to be pressure generated by a group; pressure generated by other groups; the economic climate; and, the political climate.

Resources in terms of income and membership were important to the influence of an interest group, for without these it would be unable to generate information (Chapter 6, Section 6.9). The generation of useful technical and policy information awards an organisation influence (Chapter 6, Section 6.8). The results identified a small number of key groups which included the RSPB, NFUS, WWF (in Scotland) and the RSPB, County Wildlife Trusts, FoE(UK), WWF and the NFU in the UK. The key groups in Scotland, in terms of membership and income, were the same as those which were the key groups at the UK level, although the magnitude of support at the UK level was substantially greater. There was marginally lower distribution of support/capita for conservation groups in Scotland than in England. This combined with the concentration of population in the SE of England (which resulted in an absolute concentration of support in the SE of England) to create a locus of influence geographically and politically well placed to influence the central policy arena in Westminster and Whitehall.

The NFUS, NFU, CLA and SLF were shown not to have the highest relative memberships or incomes, but were known to be particularly influential. It was evident therefore, that they had an added dimension to their influence; this attributed to two factors: (i) the main role of the group was maximising economic benefits to their members; and, (ii) their relatively easy access to, and consultative relationship with, government agriculture departments.

In summary, it is proposed that the degree of influence a group can generate is dependent upon the following factors:

- **Membership and income.** Both are essential resources. Those groups shown to be the wealthiest and most supported are also perceived to be influential in policy-making. This is also affected by the economic climate, for example the 1989 - 1992 recession caused membership of environmental and conservation groups to fall or stagnate.
- **The nature of their interest.** Economic interests are easier to mobilise than public interests; the relative power of representation is partly conditioned by the representor's control over land based resources and low incidence of free rider behaviour in agriculture interest groups.
- **Receptiveness and accessibility of government departments.** To gain 'insider' status in the relevant government department awards an interest group an added dimension to their influence. NFU(S) has a tradition of access to MAFF(SOAFD) which have been more receptive to NFU(S) than to conservation and environmental groups.
- The above three determinants of influence also combine to affect how a group is perceived. Negative or positive perceptions of a group accumulate. The RSPB was seen to have increasing influence which contributes to increasing pressure in policy arenas.

The current level of political rents will also be significant since groups involved must try to defend them. Finally, the economic and political climate are important determinants of group influence. The rising membership of environmental groups was shown to have tailed off as a result of the recession and the influence of the NFU was constrained by international demands on the European Common Agricultural Policy. Both of these were political and economic influences, which although intangible, were nevertheless important factors of influence.

7.3.5 Competition

From the survey it was concluded that the determinants of influence were attributable to the relative pressures of groups, with these groups competing for influence. This concept of competition for influence over the policy-making process was assumed to be represented by a continual struggle and renegotiation between key decision-makers and interest groups.

Consequently, the competition of interests at the different policy arenas is a substantial factor in determining the distribution of public environmental goods. The willingness of government to legitimise and protect different property regimes was shown to be partly explained by their perception of the importance of the individuals holding different types of property rights. Whilst the governments perception of the importance of agriculture has slowly changed, the NFU(S) have successfully continued to redefine their position.

The NFU(S) has a monopoly over the representation of agriculture interests, however this is clearly not the case with conservation and environmental interests, where there are several key groups active in the policy elite, such as WWF and RSPB.

The conservation lobby is widely perceived to be diffuse, although as a consequence of evolving formal and informal networks (WCL, and SWCL) it is increasingly offering a coherent and united front. The locus of support in the South East of England provides the key resources for the interest groups across the UK.

In the alternative paradigm the balance of power between conservation and agriculture groups was assumed to determine the transfer rules. The conflict over benefit streams was shown to be the focus of competition between interests (Chapter Six, Section 6.1) with the existing balance of power slightly in favour of agriculture interests. Conservation groups sought to extend or redefine transfer rules based on a more legal, and less voluntary, structure. There appeared to be no real convergence of interests, although publicly the NFU(S) tended to advocate the development of the common ground between them (Chapter 6, Section 6.10).

The overall perception of respondents was that the private economic interests of farmers remained dominant in policy-making with conservation and environmental groups successfully making some inroads to the decision-making process but, as yet,

not impacting the core. The receptiveness and accessibility of government departments to interest groups was perceived to vary according to the department and the interest being represented. Whilst all departments were seen to be reasonably accessible, the traditional relationships, established on the hierarchical structure of government departments, was thought to continue (i.e. NFUS and SOAFD; and SOEnD and WWF, RSPB). Within Scotland there was shown to be a strong policy community. Scotland relies upon key interest groups and the Scottish Office to represent Scottish interests at the national and international policy level. The NFUS appears to be representative of Scottish farming interests although the NFU was perceived to take the lead at the UK and EU level unless it was a particularly Scottish issue such as sheep or hill farming. With the concerns of the NFUS essentially subsumed into the NFU remit at these higher policy levels, the potential for competition of interests' is reduced.

7.3.6 External influences

Public opinion was generally considered to have substantial influence, but being inherently diffuse, tended to be viewed as a backdrop to more focused pressure by interest groups. The media was also seen to have an important influence on public opinion and policy-makers. Coverage of conservation and environmental issues was identified as being crisis driven, although, more recently the increased number of environmental correspondents has improved this situation.

It was universally accepted that through the issuing of directives the EU is responsible for establishing the environmental and conservation policy framework. However, because member states have the freedom to implement directives, a reasonable degree of independence is maintained by the individual nations of the EU.

It was evident from the survey that the 'competition of interests' within and outwith government departments is an ongoing process influenced both by the EU and public opinion. The EU essentially provides an umbrella framework and public opinion a base, within which competition occurs (Chapter 6, Section 6.11).

7.3.7 The nature of policy-making

The main questions addressed in this section are the catalyst for change; the focus for debate; and, across which arenas did the debate take place. In short, the cost of the

policy was the catalyst for change, with long-running organisational and political difficulties also important factors; the focus of the debate was principally organisational, (i.e. where decision-making for nature conservation in Scotland should lie). The political elements creating the long running debates ranged from the implementation of policy at the local level through to the national level, and the interdepartmental competition over decision-making and resources. The economic aspects and the short-run debate were based on the cost of policy which provided the catalyst for policy reform. There were several policy arenas and external influences, with Whitehall remaining the key arena for decision-making.

Following reform and the subsequent cost and political constraints the policy status quo appeared to be relatively stable. The majority of policy-maker respondents perceived there to be a comprehensive policy framework for nature conservation, but that this was not supported by an adequate budget commitment, and that further legislative reform was necessary. Whilst those with a farming interest saw the need to improve the justification of SSSI designations and to maintain the status quo, conservationists perceived existing policy to be without a coherent philosophy, essentially oriented towards site protection, and that legislative economic mechanisms required modification to better meet conservation objectives.

The continued dissatisfaction with the policy framework is reflected in the ongoing work of interest groups to influence policy-makers (with information being the main factor) and therefore the policy outcome can not be described as having achieved an equilibrium, in the 'neo-classical' sense. Advisory and feedback loops, and formal and informal networks characterised the interconnected and ongoing nature of policy reform. The overriding determinants of grant-in-aid to SNH were the costs of nature conservation policy and the importance of nature conservation and protection of the wider environment to Treasury and Scottish Office ministers and civil servants. From this analysis it appears reasonable to conclude that the lack of an underlying government strategy, the reactive nature of government decision-making and the competition of interests, have resulted in a fragmented and iterative evolution of policy.

Satisficing, rather than optimising, characterised the outcome of the decision-making process as was illustrated by the majority of all the policy-maker respondent sample identifying the need for policy reform.

With respect to policy-making the survey results clearly support the alternative paradigm. The overall cost of the policy is the principal catalyst for policy reform, and not the competition between interest groups to minimise members taxes or maximise members subsidies in a bid to increase allocative efficiency. The main elements of policy-making identified in the paradigm reflected those emphasised in the survey, however, one case study is not sufficient to establish clear rules for policy-making. A distinction between decision-making and policy-making can be identified: decision-making is bounded in time and location, and policy-making is an ongoing process of negotiation and information exchange.

7.3.8 Role of government

In his theory of 'Competition Among Pressure Groups for Political Influence' Becker (1983) assumed government intervention to occur as a result of pressure by interest groups to correct market failure. The relative pressure of competing interest groups was considered to be very important as government favours the politically powerful. Becker also proposed that the competition of interests has a determining effect on the extent and type of government intervention. In this study, the dominance of agriculture was identified as leading to 'voluntary regulation and incentives based' policies to encourage the provision of conservation benefits. The devolution of decision-making to meet local interests was not a policy reform that conservation groups had lobbied for, as they believed it would open up the opportunity for vested interests in Scotland to have excessive influence on the decision-making process. This research has provided evidence that policy is still being strongly influenced by the farming and landowning lobby but that government maintains its own agenda of reducing or constraining public spending. Therefore, government is not simply the servant of political rent-seekers and the politically powerful, or does not solely concentrate on maximising social welfare, but rather has its own independent agenda.

This view is commensurate with Dunleavys (1987) concept of the Broker State referred to in the alternative paradigm (Chapter 4) whereby the state does not neutrally follow public interest or mirror society. Whatever steering capacity it possesses is a product of the strength of the dominant coalitions inside and outside the state. Coalitions were shown to include MAFF and NFU; SOAFD and NFUS; DOE, SOEnD, and a number of conservation and environmental groups, the most influential of which are RSPB and WWF.

From the above discussion it is possible to conclude that the role of the UK government can essentially be described as reactive, with an internal agenda to minimise public spending. Implications may then be drawn as to the contemporary issues of existing policy and the likely direction of future policy for nature conservation with respect to agricultural land use.

7.4 Conclusions: validation of the alternative paradigm

The two main propositions of this thesis were:

- 1. policy is determined by government decision-makers on the basis of competition between agriculture/landowning and environmental/conservation interests;*
- 2. property rights and claims to benefit streams provide the focus for competition between agriculture and landowning, and environmental and conservation interests.*

The analysis in the preceeding section of this chapter (Section 7.3) validates the alternative paradigm upon which these propositions are based

Individual farmer interests have been shown to be multi-dimensional, with the difference between the diverse interest groups (maximising economic benefits to members or promoting the wider public interest) reflecting the range of interests seeking to influence policy arenas. The degree of influence exerted was shown to be a function of a groups resources, the nature of their interest (private or public), receptiveness and accessibility of government departments and the accumulation and interaction of these three determinants. The overall political and economic climates were also identified as important determinants of a groups influence.

The EU sets the framework for UK conservation and environmental policy, within which the driving force of policy is the competition between conservation and agriculture interest groups to maintain, or redistribute, existing property rights. The influence of the EU and the dominance of agriculture interests in the UK policy-making arena indicate that there is not a free market for influencing UK conservation policy. Competition of farming and conservation interests are concentrated in a policy elite, where only a few key interest groups are involved. Government is reactive to policy change, having no overall long-term policy strategy other than to reduce public

spending. Consequently, policy development is incremental and driven by the dominant interests.

The political market in which interests are represented divides into two main interests: private economic and public. Within these there is a further division: 'private economic' includes landowning and farming; and, 'public' includes conservation and environmental interests. The origins of the division between the conservation and environmental movements was identified in the early evolution of recreation, landscape, nature conservation and wider environmental concerns as separate issues (Chapter Two). During the 1980s common ground was developed between farming, landowning and conservation interests.

To be able to make reliable generalisations about the policy-making process would require a significantly larger body of data: information exchange continues as the basis for ongoing development of policy analysis. The difference between policy-making and decision-making has been established; where following policy-development there is a period of decision-making during which policy reform occurs.

The aim of the thesis has been *'to identify the determinants of the UK government economic policy for nature conservation'*. The principal determinants identified are the European Union, public opinion, the relative influence of interest groups and the government's agenda.

The implications of the above findings for future policy development and research are discussed in the final chapter, Chapter 8.

8

Implications for future development of economic policies for conservation.

8.1 Introduction

The alternative paradigm has provided an understanding of the competition of interests at both the policy-making and policy implementation levels. This integrated approach allows the constraints and limitations for development of policy at both levels to be identified.

Chapter 8 first outlines the existing state of policy development and the likely future direction given the political and economic parameters identified in Chapter Six. In recognition of these parameters, suggestions for future policy development are presented.

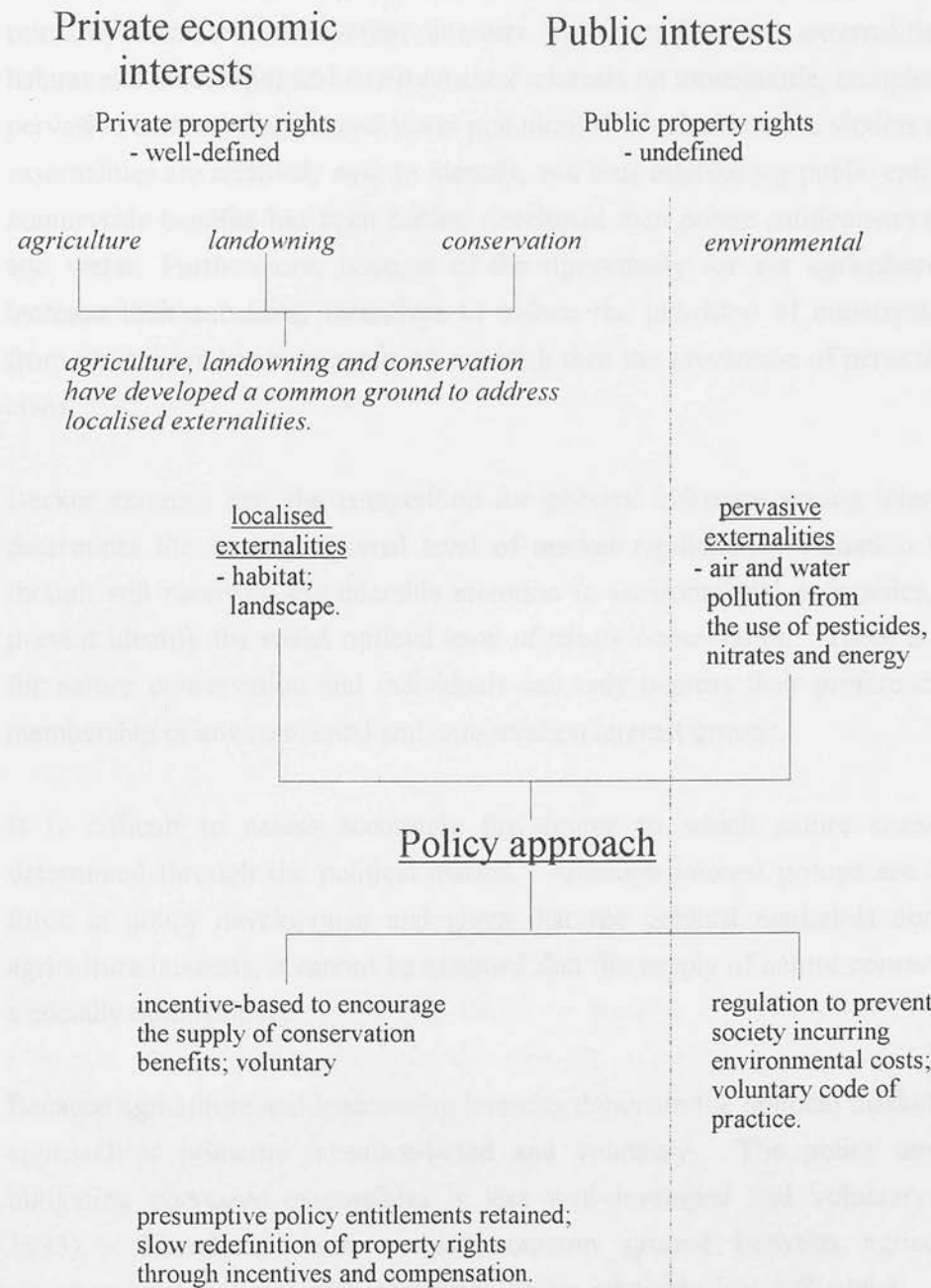
8.2 The political and economic parameters of policy development

The main determinants of policy are the EU, key interest groups, government departments and public opinion. The driving force of policy is the competition between key interest groups (e.g. NFU, RSPB, WWF) and the main constraints to policy reform are the costs of policy, political will, vested interests and government ideology. These political and economic parameters have shaped the existing trend towards *"commoditisation of rural space and non-use values"* (Marsden, Murdoch, Lowe, Munton and Flynn, 1993) which is perceived to be a part of the attempt by landowners to continue drawing on their pre-emptive claim to maintain existing property rights.

So far there has been a tradition of voluntary co-operation and self-regulation. The designation of SSSIs has challenged this tradition, however the NFU has responded by continually redefining its position and therefore maintaining an element of the *"tyranny of the status quo"* (Becker, 1983). The special relationship between agriculture interests and the government agriculture departments continues today.

How much more agriculture and conservation lobbies can develop common ground is dependent upon the relative strengths of the two lobbies.

Figure 8.1 A range of interests



In Figure 8.1 the two principal interests are identified (private and public) and subdivided into four main types: agriculture; landowning; conservation; and, environmental. The essential difference between private interests and public interests is grounded in the definition of property rights, or benefit streams, associated with land use. The division between conservation and environmental interests exists primarily because conservation interests focus on localised externalities (loss of habitat and landscape) and environmental interests on more subtle, complex and often pervasive externalities (air and water pollution). Offenders and the victims of localised externalities are relatively easy to identify, and thus establishing public entitlements to countryside benefits has been further developed than public entitlements to clean air and water. Furthermore, because of the opportunity for the agriculture lobby to increase their subsidies, incentives to induce the provision of countryside benefits from agriculture has been easier to establish than the prevention of pervasive external costs.

Becker assumes that the competition for political influence among interest groups determines the socially optimal level of market regulation. Valuation techniques, though still receiving considerable attention in environmental economics, cannot at present identify the social optimal level of nature conservation. There is no market for nature conservation and individuals can only express their preferences through membership of environmental and conservation interest groups.

It is difficult to assess accurately the degree to which nature conservation is determined through the political market. Although interest groups are the driving force in policy development and given that the political market is dominated by agriculture interests, it cannot be assumed that the supply of nature conservation is at a socially optimal level.

Because agriculture and landowning interests dominate the political market the policy approach is primarily incentive-based and voluntary. The policy approach for mitigating pervasive externalities is less well-developed and voluntary (SOAFD, 1993). Therefore, there is less common ground between agriculture and environmental groups, with the latter being relatively less influential. Given the relative lack of influence of wider environmental interests, it is necessary that the government intervene to coerce agriculture interests to embrace environmental regulation if pervasive externalities are to be mitigated.

8.3 Future policy

From Figure 8.1 there are two possible directions for nature conservation policy-makers:

- (i) the status quo or "*free market environmentalism*" (Jacobs, 1993) approach; that is to say, continue with the present iterative and fragmented policy in which the government is principally reactive to policy reform; or
- (ii) the development of a clear definition of public entitlement and the establishing of public property rights. This would require government intervention to address wider environmental issues (pervasive externalities). The lack of political will (NIMBY) to embrace wider environmental issues was identified in Chapter Six as a constraint to further reform.

The UK government could achieve its conservation and economic goals through the second direction by legislating to require farmers to pay to depart from the goals rather than paying them to conform to the goals. Farmers could buy marketable permits in order to engage in certain agricultural activities. This system would provide the government with revenue rather than being a burden on the public spending budget. However, it takes a long time to change the system of property rights and to implement a law which is fundamentally different. Government faces political constraints to changing the reference points because of the dominance of agriculture and landowning interests. A continuation of the current direction of government decision-making (leaving policy to the market) is more likely.

Future policy development would therefore have to come from a change in the influence of one of the four main determinants of policy: government departments, key interest groups, public opinion and/or the EU.

8.3.1 Government departments

Policy reform is unlikely to come from within government for the reasons explained above. Increased competition of interests within the government administration may occur over time and if public pressure on government departments also increases, the supply of public environmental/conservation goods may increase. In the meantime,

there exist political and monetary constraints to embracing international sustainability agreements and protection of the wider countryside.

8.3.2 Influence of interest groups and public opinion

The private economic interests of agriculture are an important determining factor in policy development. The bargaining process has been shown to be weighted in favour of more organised economic interests. A policy elite has emerged which includes groups which represent public and private interests. These have formed loose coalitions with economic interests by developing their common ground. Furthermore, because the roles of private and public interests remain essentially unchanged (Figure 8.1), the conflict between them is unlikely to alter.

Factors which could change the relative influence of the two lobbies

- There may occur a decrease in the influence of the NFU(S) as it becomes less representative of the whole body of its members. As a consequence a number of smaller farming interest groups may become more influential. The trends of these politically marginal farming interest groups require examination. In the future the representation of farming interests may experience more heterogeneity and competition between farming groups may increase. This increase in competition would free up the political market as long as government departments increase their accessibility to non-elite interest groups and allow other interests, including wider environmental interests, into the land use debate.

However, NFU may continue its behaviour of adapting its remit in order to maintain its influence. Since the policy elite broadly determines policy direction, future reform is particularly dependent upon on how much the NFU broadens its remit. It is evident that the senior levels of the NFU recognise the need to address wider environmental issues (Swales, V., pers comm RSPB, Bedfordshire, 1994).

- The continuing competition between conservation and environmental groups will affect the relative influence of conservation/environmental and farming/landowning lobbies. The continuing increase in influence of the formal conservation/environmental networks will serve to promote conservation interests on the policy agenda. Conservation groups and environmental groups will have to strive to establish their common ground in order to pool resources and present a

stronger, united lobby. The alternative is that existing large conservation and environmental groups (e.g. RSPB, WWF) who have formed loose 'coalitions' with the farming/landowning lobby may develop those further. These large conservation groups thus become 'political market leaders' and perpetuate the policy elite.

- The majority of the general public pay taxation, of which a small proportion is allotted to agricultural support. This severely reduces the potential for mobilising public concern (i.e. it is simpler to mobilise a small number of people paying a large tax or receiving a subsidy, than a large number of people paying a small tax or receiving a subsidy (Becker, 1983)). Consequently the conservation and environmental movements experience problems of freerider behaviour, (particularly associated with the environmental movement because of the pervasive nature of environmental externalities).

8.3.3 Influence of the European Union

The significant influence of the EU will probably continue as will the internationalisation of conservation and environmental policy. As the EU supports broader environmental protection it will, in the long run, be necessary for the UK government to address environmental issues more fully. However, as it is unlikely that enforcement will keep pace with environmental legislation, effectiveness of reform may be undermined (Collins and Earnshaw, 1993).

8.4 Policy prescriptions

Recognising the political and economic constraints under which the UK government operates, and that it is likely to continue with free market environmentalism (dominated by the policy elite) the following policy prescriptions are presented. These policy recommendations are relevant to Orkney and other equally geographically and politically remote farming communities with high nature conservation value and in which farmers are characterised as having multi-dimensional farming interests.

SSSIs are considered as *"the critical stock of natural capital in the UK"* (SNH, pers comm, 1994) and therefore their continuing protection is essential. However, they are widely viewed as being, to some extent, inappropriate and an emergency, stop-gap measure. The results of this thesis have shown that the designation of SSSIs have

gradually been accepted into the farming community in Orkney. SSSIs, although essential are considered to be an expensive method of maintaining the stock of natural capital. It is probable that over the next 10 to 25 years existing management agreements will not be renewed, and that the farmer and landowners pre-emptive policy entitlement will continue to be eroded. Coupled with this, the transfer rules associated with SSSIs will have to be strengthened in order to ensure continuing protection post agreement.

The farmer profile presented in Chapter 6 is made up of three main dimensions: economic, property rights and socio-political. These provide the framework upon which policy prescriptions can be made.

Table 8.1 Policy framework and requirements

Framework	Policy requirements
<p>1. Economic - need to maintain benefit streams and require payment to trade benefit streams.</p> <p>2. Property rights - loss of control, require flexibility.</p> <p>3. Socio-political - negative perceptions of SSSIs by those without SSSIs indicate farmers require increased provision of information, and increased local co-operation and consultation by SNH.</p>	<p>1. Encourage the provision of public conservation goods from the wider countryside.</p> <p>2. Address wider, more pervasive environmental externalities; discourage external environmental costs of agricultural activity</p> <p>3. Meet national conservation and environmental requirements.</p>
<p>Additional information: (i) farmer interests are multi-dimensional, complex and personal; (ii) other farmers are important to farmer decision-making; (iii) farmers generally support conservation objectives; (iv) farmers recognise the need for a combination of regulation and voluntary mechanisms</p>	

To meet the policy requirements within the above framework and employ (i) - (iv) (additional information) the following proposals are made.

- **Integrated policy** which seeks to enhance the supply of conservation benefits and minimise external environmental costs. Develop a policy framework based on the experience of cross-compliance mechanisms in the USA and ESA management agreements in the UK, which also includes the Code of Good Working Practice. To receive payments farmers would have to meet certain environmental guidelines (hence the cross-compliance element) and incentives would be offered within a framework to enhance the supply of conservation benefits. In essence, the policy should be voluntary in order to protect farmer autonomy while also addressing pervasive externalities arising from farm pollution. To generate sufficient interest (to meet national conservation and environmental objectives) the financial commitment would need to be substantial given the low uptake rates in some ESAs. This may be associated with cost reductions in other areas especially those resulting from CAP reform which in the long run may mean no overall increase in public spending. This approach would encourage farmers to develop their farm plans according to extensive farming objectives commensurate with, for example, the Integrated Farming Systems concept (Jordan and Hutcheon, 1993)¹.
- **Promote local networks** to develop the common ground between farming and conservation organisations at the local level. These include SAC, SOAFD, NFUS, SNH and FWAG(S). Exploit SAC, SOAFD and NFUS farmer contacts to integrate public conservation interests into private economic agricultural activity. This would recognise the integral role of local organisations in meeting non-national needs in a coherent way.
- The **importance of other farmers** is recognised and the need to minimise bureaucracy and maximise flexibility. Therefore, the introduction of participatory approaches into the farming community would meet all three dimensions of the framework in Table 8.1. ESA-type management plans would be established through the local organisations network and then farmers would adopt a self-

¹ Integrated Farming Systems involves the use of a selection of pesticides, nutrients, soil and water management technologies and practices and most represent low-external input options. They are usually integrated on farms to give a finely tuned strategy specific to the biophysical and socio-economic conditions of individual farmers. Natural processes increasingly substitute for external inputs, and so the impact on the environment is reduced. (Jordan, V.W.L., and Hutcheon, J.A., (1993) Less-intensive Integrated Farming Systems for Arable Production and Environmental Protection The Fertiliser Society Proceedings No. 346

regulatory approach within the guidelines of the local organisations. This would allow farmers to pursue multi-dimensional farming objectives.

- Establish a long-term commitment to formal and informal **agricultural education** in order to integrate good conservation and environmental working practices into farming and land use.

8.5 Overall conclusions for future policy development

The following conclusions are made on the basis of the alternative paradigm about the process by which economic policies for nature conservation are determined, and how economic theory can be used to describe a theoretical framework. SSSIs have provided an entry point for identifying the key policy issues for the design and implementation of economic policies for conservation of natural habitats.

There can be no hard and fast laws of policy-making and implementation but the alternative paradigm presented in this thesis provides a framework that encompasses the continuity and change in public expenditure and illustrates the integral nature of expenditure and policy. Whilst a complete empirical data set does not exist for determining policy, this study provides support for an interim assessment by narrowing the gap between theory and practice, and global trends and local changes.

The property rights argument illuminates policy design and helps to define the issues and focus debate. Property rights are defined through the political bargaining process. The multi-dimensional interests of farmers illustrate that a range of farmer 'types' exist, and that this provides an opportunity for the development of 'the public interest' through government policy.

Property rights are central to the emerging environmental economics discipline, which is already beginning to contribute to environmental and conservation policy design and implementation. As valuation techniques mature it may be possible for policy-makers to get closer to the 'socially optimal level' of nature conservation.

One of the principle conclusions of this study is that the competition of interests will continue, but that the balance will gradually change as the economy develops and the membership of conservation and environmental groups increase. In the UK, there are few signs of imminent change, with the policy elite (NFU, WWF and RSPB)

continuing to dominate the direction of future policy. Therefore, if government intends to meet its national, European and international conservation and environmental commitments (for example, Agenda 21) it will be necessary to adopt a more proactive role in the development of economic policies for conservation of natural resources.

Given the escalating public concern over land use and degradation, it is essential that the evolutionary process of policy development be understood if more desirable (socially optimal) environmental objectives are to be achieved. This thesis initially identified the inherent limitations and inaccuracy of adopting a neo-classical perspective of policy development as extolled by Becker (1983). It then proceeded to construct an alternative paradigm whereby policy development was proposed to be a function of (i) government decision-makers on the basis of competition between agriculture/landowning and environmental/conservation interests and (ii) property rights and the claims to benefits streams provide the focus for competition between agriculture/landowning and environmental/conservation interests.

These propositions were empirically tested and validated by conducting a survey in an area of SSSI designations.

From the constructed model of the policy development process, several fundamental themes for moving towards a more socially desirable environmental and conservation policy are evident:

- traditional relationships of consultation should be weakened to open up the political market to more and other interest groups (i.e. increased competition of interest groups at the policy-making level) in order to increase the subjects on the policy agenda;
- less of a 'free market' approach to environmental and conservation policy by government. This may occur as a result of the EU influence;
- change in environmental and conservation policy is essentially incremental and driven by crisis. Future reform depends on an increase in public support to environmental/conservation groups and public pressure on the government. At present, given the problems of freerider behavior associated with conservation and

environmental group membership, and widespread NIMBY attitude there are no imminent signs of such an increase.

By determining a framework for nature conservation policy-making this study has illustrated the main determinants and parameters of economic policies for conservation and therefore the likely way forward in policy design. This research has also set the context for policy reform and identified the key issues for successful implementation of policy to meet objectives. Furthermore, it provides the context for ongoing research in policy development and suggestions for future research are outlined below.

8.6 Future research

8.6.1 Policy implementation

- Research into the appropriateness and effectiveness of an integrated framework for meeting the policy prescriptions addressed in Section 8.4 above is required. The framework would integrate cross-compliance and incentive mechanisms with farm management plans and the Code of Good Working Practice in order to meet economic and conservation/environmental objectives. It would be necessary to determine the appropriateness and effectiveness of such a mixed system of voluntary and regulatory mechanisms to meet a multi-objective policy while still maintaining farmers benefit streams. Given the importance of maintaining farmer benefit streams, research into the economics of a mixed system of support and the likely economic impact on an area such as Orkney would be necessary. It is widely recognised that regions vary according to physical factors (climate, soil type, topography) and that farmer types vary according to economic, property rights and social factors (Chapter Six). Therefore, a study determining a typology of farmer interests in a number of regions within the framework established in Chapter 6 and a typology of agricultural regions in parallel is proposed. From this it would be possible to establish not only the parameters of farmer interests according to economic, social, geographical and ecological determinants, but also the economic, social, geographical and ecological parameters of regions. A comparison across different areas could be made and the determinants of attitudes which affect agricultural practices could be established, and matched with physical data from the regions. Such a coherent and integrated research programme would require a multi-disciplinary approach and would promote successful policy

design and implementation, not only in terms of farmer interests but also for conservation and wider environmental objectives.

- In support of the above research, further research into the appropriateness of participatory approaches to conservation and environmental policy in areas such as Orkney should be undertaken in order to maximise policy flexibility for farmers and local organisations. The purpose of such research would be to determine methods of farmer participation in the above type of policy, which sought to minimise the overall costs of policy and maximise the flexibility open to farmers.
- A more long run objective of agric-environment policy should be to modify farmer behaviour and therefore research into the most efficient and appropriate farmer education and advisory infrastructure ought to be undertaken. This would not only secure farmers autonomy over decision-making but also enhance the supply of environmental benefits and minimising environmental costs.

Integral to all of the above research suggestions should be farmer surveys in order to maximise the relevance of policy proposals to farmer requirements and abilities; thereby securing the success of policy design and implementation with respect to economic, social and environmental objectives.

8.6.2 Policy design

- Continue research into valuation techniques in order that it becomes possible to edge towards a more socially optimal level of nature conservation; environmental economists would then be in a position to offer policy-makers guidelines as to what the preferences of society are rather than leaving the supply of nature conservation to be determined by the existing policy elite. As public awareness of environmental and conservation issues increases, so their ability to express their non-market values may also increase. This would be an interesting and useful hypothesis to investigate.

- Research into the trends in membership and income resources of farming, conservation and environmental groups in Scotland and the UK in order to identify any likely increase in competition among interest groups. This would indicate any changes in public support for the above interests, (and therefore, public opinion) which would also impact the future direction of policy. In parallel with this, a survey of public attitudes to environmental protection could be undertaken in order to identify the extent of 'freerider' behaviour and the reasons why the increasing support for environmental and conservation issues witnessed in the 1980s has slowed.
- Research into who or what is the driving force of the EU given the considerable influence of the EU upon UK environmental policy. That the EU is also driven by influential interest groups is likely. If this is the case, then it would be possible to establish the likely future direction of EU environmental policy once the coalitions and conflicts at the European level were established.

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Appendices:

Appendix I: Titles of Articles in the '*Orcadian*'

- " " **II:** The Questionnaire Design
- " " **III:** The Survey
- " " **IV:** The χ^2 Test
- " " **V:** Interest Group Profile
- " " **VI:** Results

Page No.	Date	Page	Title
1	21 January 1983	p. 1	"The Orkney Islands: a new era begins"
2	25 January 1983	p. 4	"The Orkney Islands: a new era begins"
3	28 February 1983	p. 1	"The Orkney Islands: a new era begins"
4	1 March 1983	p. 1	"The Orkney Islands: a new era begins"
5	1 March 1983	p. 4	"The Orkney Islands: a new era begins"
6	1 March 1983	p. 7	"The Orkney Islands: a new era begins"
7	1 March 1983	p. 10	"The Orkney Islands: a new era begins"
8	1 March 1983	p. 13	"The Orkney Islands: a new era begins"
9	1 March 1983	p. 16	"The Orkney Islands: a new era begins"
10	1 March 1983	p. 19	"The Orkney Islands: a new era begins"
11	1 March 1983	p. 22	"The Orkney Islands: a new era begins"
12	1 March 1983	p. 25	"The Orkney Islands: a new era begins"
13	1 March 1983	p. 28	"The Orkney Islands: a new era begins"
14	1 March 1983	p. 31	"The Orkney Islands: a new era begins"
15	1 March 1983	p. 34	"The Orkney Islands: a new era begins"
16	1 March 1983	p. 37	"The Orkney Islands: a new era begins"
17	1 March 1983	p. 40	"The Orkney Islands: a new era begins"
18	1 March 1983	p. 43	"The Orkney Islands: a new era begins"
19	1 March 1983	p. 46	"The Orkney Islands: a new era begins"
20	1 March 1983	p. 49	"The Orkney Islands: a new era begins"

**Appendix I: Titles of Articles in the 'Orkadian' Referring to
the Coverage of SSSI Designations
by the NCC in Orkney during 1983, 1984 and 1985**

No. of article	Date	Page	Title
1	13 January 1983	p.1	<i>"Eday designation cause for concern"</i>
2	31 March 1983	p.1	<i>"NCC Eday plan goes ahead"</i>
3	22 September 1983	p.1	<i>"Council vote against Hoy sale"</i>
4	6 October 1983	p.1	<i>"Fruitful talks on conservation fears"</i>
5	6 October 1983	p.4	<i>"Hoy sale" In: 'Letters to the Editor'</i>
6	6 October 1983	p.5	<i>"Countryside Committee discusses Hoy trust"</i>
7	1 December 1983	p.7	<i>"Conservation area renotified"</i>
8	5 January 1984	p.3	<i>"Spread the accurate word on SSSIs"</i>
9	12 January 1984	p.1	<i>"Farming versus Conservation"</i>
10	19 January 1984	p.4	<i>"Nature can't keep up" In: 'Letters to the Editor'</i>
11	19 January 1984	p.5	<i>"Conservancy Plan explained to Farmers"</i>
12	26 January 1984	p.1	<i>"Council to protest over Harray SSSI"</i>
13	26 January 1984	p.3	<i>"Strictly for the birds"</i>
14	26 January 1984	p.4	<i>"No conflict" In: 'Letters to the Editor'</i>
15	2 February 1984	p.1	<i>"Wallace speaks on conservation and CAP"</i>
16	16 February 1984	p.5	<i>"The case for habitat conservation in Orkney"</i>
17	23 February 1984	p.4	<i>"Traditional approach to conservation in Orkney"</i>
18	23 February 1984	p.5	<i>"Error in acreage calculation of SSSI"</i>
19	8 March 1984	p.1	<i>"NCC deny 'threats' to SSSI landowners"</i>
20	22 March 1984	p.4	<i>"Curbing modern farming methods" In: 'Letters to the Editor'</i>

No. of article	Date	Page	Title
21	22 March 1984	p.5	<i>"Farmers appeal to NCC"</i>
22	29 March 1984	p.1	<i>"Councillor reserves right to criticise"</i>
23	5 April 1984	p.1	<i>"SSSI objections: Talking about conservation"</i>
24	26 April 1984	p.1	<i>"SSSI discussions" In: 'News in Brief'</i>
25	24 May 1984	p.1	<i>"Advisory Committee put SSSI decision on ice"</i>
26	14 June 1984	p.3	<i>"Convenor reports on 'cordial' NCC meeting"</i>
27	28 June 1984	p.1	<i>"Grimond calls for Orkney SSSI curb"</i>
28	28 June 1984	p.4	<i>"NCC reply to convenors remarks" In: 'Letters to the Editor'</i>
29	5 July 1984	p.4	<i>"Peat bank controversy" In: 'Letters to the Editor'</i>
30	12 July 1984	p.1	<i>"NCC drops five scientific sites"</i>
31	12 July 1984	p.6	<i>"NCC compensation" In: 'Letters to the Editor'</i>
32	30 August 1984	p.1	<i>"RSPB - Government should take conservation flak"</i>
33	30 August 1984	p.1	<i>"Farmers and conservation - moving closer"</i>
34	4 October 1984	p.1	<i>"NCC under fire over Westray conservation order"</i>
35	4 October 1984	p.1	<i>"Economic interests must be considered"</i>
36	11 October 1984	p.1	<i>"Feelings run high over conservation order"</i>
37	18 October 1984	p.1	<i>"Orkney could become 'conservation desert' "</i>
38	25 October 1984	p.4	<i>"Councillors 'drivel' on conservation" In: 'Letters to the Editor'</i>
39	6 December 1984	p.4	<i>"Conservation" In: 'Letters to the Editor'</i>
40	6 December 1984	p.5	<i>"Countryside should not become a museum"</i>

No. of article	Date	Page	Title
41	13 December 1984	p.1	<i>"NFU have fruitful talks on Westray SSSI"</i>
42	13 December 1984	p.10	<i>"HIDB issue guide on conservation areas"</i>
43	31 January 1985	p.4	<i>"Desecration or Conservation" In: 'Letters to the Editor'</i>
44	14 February 1985	p.3	<i>"Countryside Committee propose coastline walks for tourists"</i>
45	21 February 1985	p.1	<i>"Objections to Westray SSSI are withdrawn"</i>
46	21 February 1985	p.6	<i>"Failure of voluntary approach may mean statutory controls"</i>
47	7 March 1985	p.1	<i>"We were misled by NCC, claims councillor"</i>
48	21 March 1985	p.1	<i>"NCC to dive under water"</i>
49	18 April 1985	p.1	<i>"Orphir and Stenness SSSI - Council drop rejection"</i>
50	18 April 1985	p.4	<i>"Udal land tenure"</i>
51	2 May 1985	p.1	<i>"More 'positive atmosphere' now over conservation"</i>
52	2 May 1985	p.7	<i>"Countryside Committee call for new anti-litter drive"</i>
53	9 May 1985	p.1	<i>"New step to seal conservation rift"</i>
54	4 July 1985	p.1	<i>"Land buying grants to RSPB comes under fire"</i>
55	4 July 1985	p.6	<i>"Conservation done by Orcadians for Orcadians"</i>
56	11 July 1985	p.1	<i>"RSPB in row over Evie land purchase"</i>
57	18 July 1985	p.1	<i>"RSPB reject accusation over Evie land purchase"</i>

Appendix II: The Questionnaire Design

II.1 Response format.

There are three basic response formats that questions can adopt. The first is open-ended question in which the respondent is free to give any answer within the limits imposed by the question. The second is multiple choice format in which the respondent must select from among those specified responses. The third method is a dichotomous question. Like multiple choice, dichotomous questions may be referred to as 'closed' questions (Tull and Hawkins, 1987).

In the questionnaire used to interview farmers in Orkney a combination of all three methods was used in order to provide variation in what proved to be a lengthy interview and to meet differing objectives for different questions. Each method has its particular advantages and disadvantages and during the actual survey some questions worked better than others because the aim of the question was more suited to the question format chosen. A full discussion of the questionnaire follows.

Open-ended questions

The degree of openness will vary between questions. For example, question 10 asked,

"Can you name the organisations which represent conservation interests?"

This gave the respondent almost complete freedom to identify the organisations they considered representative of conservation or farming interests.

The question was also pre-coded so that the respondent was effectively faced with an open-ended question although for the interviewer it was a multiple choice question. The interviewer selected the answer depending on the respondents reply.

Open-ended questions had a number of desirable features. The respondent was not influenced by a pre-stated set of answers. It was more likely that a wide range of responses would be achieved free of any bias that the researcher unknowingly included in pre-coded responses. Tull and Hawkins (1987) promote this method suggesting it can offer a 'feel' for the information which is difficult to capture with more structured techniques. They suggest respondents enjoy a few opportunities to express themselves openly during the interview and representative quotes may be used in report writing to add to the quality of the information. While there are several sources of error or difficulty associated with this method only one important source of error associated with open-ended questions is considered relevant here. The question may have measured the degree of respondent 'articulateness' rather than the real issue. Some respondents answer in-depth on almost any issue just as others, with equal knowledge, may be more reluctant to answer or need more time to consider their answer than that for which the interviewer was prepared to allow (Tull and Hawkins, 1987).

Multiple-choice questions

Multiple choice questions have advantages over open-ended questions. That is, they are easier for the interviewer and respondent and they tend to reduce interviewer bias and bias caused by varying degrees of respondent articulateness. Also, multiple choice questions enable easier tabulation and analysis especially when compared to dichotomous questions in that they offer measures of gradation or degree. An example of a multiple choice question is Question 8c:

8c *Would you say it has any bias towards farming or towards conservation interests?* (PROMPT)

- 1. definitely farming ☐
- 2. probably farming ☐
- 3. neutral ☐
- 4. probably conservation ☐
- 5. definitely conservation ☐
- 6. don't know ☐

However, there could be disadvantages associated with this technique. For example, the provision of answers can result in the omission of alternatives. Even when an 'other' category is included there is a strong tendency to choose from among the alternatives offered. This may occur because the respondent is tired or because one of the listed answers sounds familiar or logical rather than it being the proper answer to the question. Alternatives that the respondent had not thought about may be selected over alternatives that would have been thought about independently.

The basic rule to knowing how many alternatives to include is that no alternative should occur more than once and all possible alternatives should be included when practical.

It is also important to consider how many alternatives a researcher offers on either side of an issue. As above, in question 8c, it is important to offer a balanced number of alternatives.

Position bias is another form of bias to take into account. This results from a tendency of respondents to select those values near the middle of the range presented. This type of error is considered particularly critical when there is no 'correct' answer. If the range of answers covers the hypothesis in the middle of the range there is a possibility that the hypothesis will be confirmed although this could be incorrect (Tull and Hawkins, 1987). This could be overcome by asking another question in a different format but which has the same hypothesis.

The final point to note is in the wording of alternatives listed and the inclusion, labelling and positioning of *"don't know"* or *"neutral"* categories. Within this questionnaire in trying to overcome position bias the aim has been to vary the order of types of alternatives. That is, changing the position of the aforementioned categories within the range and inserting the positive answers at the beginning, middle or end of ranges. Prompt sheets were used in the all three questionnaires where appropriate. These offered a range of answers and the order of choice was altered in order to avoid position bias. The prompt sheets are included at the end of the farmer questionnaire in Appendix III.

Dichotomous questions

Dichotomous questions are an extreme form of multiple choice questions and allow only two or three answers, for example, *'yes'*, *'no'* and often also include a supplementary neutral category such as *'don't know'*.

The advantages associated with the dichotomous question are similar to those with the multiple choice question. It is especially well-suited for determining certain points of fact, such as in question 32;

"Do you have an SSSI designated on your farm?" Yes/No

II.2 Decisions about the question sequence.

Questions need to be organised in a logical manner to avoid introducing errors. The specific order in which the respondents receive the questions is a potential source of error. It was decided in this questionnaire to begin with some simple, objective and interesting questions. This reassures and relaxes the respondent and attains their co-operation. Therefore, the next determinant of the structure of the questionnaire is topic order. For example, asking them whether or not they carried out practical conservation work before they answered questions relating to their attitudes towards conservation ensured respondents were not led into feeling they ought to respond positively to one or other question. Also, initial questions of each topic were constructed to avoid providing a biased frame of reference or suggesting the answers to following questions.

The subject construction allows a dovetailing of the three surveys. This is illustrated in Table 5.1, Chapter 5.

II.3 Description of farmer questionnaire.

Information sources

The first six questions of the questionnaire aimed to discover respondents information sources for their farm business. These were simple multiple choice questions aimed at putting the respondent at ease. These were followed by question seven about respondents membership of farming and conservation organisations, again a direct and simple multiple choice question.

Wider nature conservation issues

The next topic covered was wider nature conservation issues about policy at local and national government levels and the role of pressure groups.

The first two dichotomous questions (8a, 8b) aimed to discover respondents attitudes to local council involvement in farming and conservation issues followed by a third multiple choice question (8c) on whether they perceived any bias in the local councils decision-making. This was followed by a large multiple choice question on perceptions about different organisations involvement in the policy-making process.

Questions 10 to 13 were open-ended and aimed to discover the most well-known and most representative organisations which represent farming, landowning and conservation interests. It was thought rather than create any bias by prompting respondents into choosing the most familiar response in a range of multiple-choice answers it would be better to allow them to name organisations spontaneously.

The role of pressure groups

The questions were multiple choice and aimed to discover respondents perceptions about the role, importance and effectiveness of pressure groups associated with nature conservation, landowning and farming interests. They also aimed to discover how representative respondents felt groups were of local Orkney interests and also how conservation-minded they saw themselves as being with respect to the rest of the UK.

The final questions in this topic asked respondents how they perceived the balance of interests between conservation and agriculture, the role of the media and if they saw the government as actually having a nature conservation policy. This was kept to the end to allow respondents to warm up to the subject under discussion and give them time to have thought about the topic.

Sites of Special Scientific Interest

The next topic was specifically on Sites of Special Scientific Interest (SSSIs). The first seven questions were aimed at discovering the perceptions of the respondent about the wider issues surrounding the policy of SSSIs - the aims of the policy, the shortcomings and any changes they would see made to the system.

Two sections: those with SSSIs and those without SSSIs

The questionnaire was then divided up into two sections following a dichotomous question on whether the respondent had an SSSI designation on their land. If the response was 'yes' there followed a series of open-ended and multiple choice questions about the nature and the impact of the designation. It was also intended that the real issues behind the designation and any associated problems be discovered.

If the respondent did not have an SSSI designation this section was omitted and there was a separate section of hypothetical questions aiming to discover how the respondent would feel to having a designation. This was aimed at discovering any preconceptions respondents have surrounding the implementation of the Wildlife and Countryside Act of 1981. As in the previous section, multiple choice questions were asked to discover farmer perceptions with respect to beneficial and difficult aspects of SSSI designation and the likely financial and ecological impact of such a designation.

All respondents were then asked about their own conservation activities in order to give a short break from questions about SSSIs.

SSSIs - the wider issues

The questionnaire then returned to wider questions surrounding the equity of the system, the existing system of compensation and how it is calculated, the effectiveness of a voluntary approach and the possible alternatives they would like to see in place. Finally, in this section respondents were asked if they consider environmentally-friendly farming and prosperous farming to be compatible.

Socio-economic profile of respondents

The final section included eleven questions in order to attain a socio-economic profile of the respondent. These were direct and simple open-ended and multiple choice questions.

These questions covered whether the respondent was an incomer or a local, age, education levels, tenure status and size of farm and voting behaviour. Some of these questions were asking for sensitive information and so by being placed at the end of the questionnaire thus gave the interviewer time to establish a rapport with the respondent.

Also, simple questions were needed at the end because the questionnaire was so long it would have been difficult to maintain respondents attention to attain accurate answers from in-depth, more complex questions.

II.4 Decisions on the layout of the questionnaire.

The questionnaire was organised in a manner to avoid confusion and recording errors. Therefore, only 3, 4 or 5 questions were presented on each page with either a formal answer-recording procedure in the form of boxes or sufficient space for writing open answers.

Appendix III: The Survey

The Farmer Questionnaire

The Local Organisation Questionnaire

Agenda for Policy-maker Interviews

Country: Telephone:

Section 2: Education and Training

Has training provided any specific skills or knowledge that have been useful in your work?

Which of the following are the most useful sources of information for you?

☐ English Agricultural College (EAC)

☐ English Office, Department of Agriculture (EOD)

☐ National Farmers Union for Scotland (NFUS)

☐ Planning and Wildlife Advisory Group (PWAG)

☐ Agriculture Training Board (ATB)

☐ Scottish Natural Heritage (SNH)

☐ Scottish Wildlife Society (SWS)

☐ Scottish Wildlife Trust (SWT)

☐ Scottish Wildlife Society (SWS)

☐ Scottish Wildlife Society (SWS)

☐ Scottish Wildlife Society (SWS)

The Farmer Questionnaire

Has training provided any specific skills or knowledge that have been useful in your work?

☐ English Agricultural College (EAC)

☐ English Office, Department of Agriculture (EOD)

☐ National Farmers Union for Scotland (NFUS)

☐ Planning and Wildlife Advisory Group (PWAG)

☐ Agriculture Training Board (ATB)

☐ Scottish Natural Heritage (SNH)

☐ Scottish Wildlife Society (SWS)

☐ Scottish Wildlife Trust (SWT)

☐ Scottish Wildlife Society (SWS)

☐ Scottish Wildlife Society (SWS)

☐ Scottish Wildlife Society (SWS)

SECTION ONE : MEMBERSHIP AND INFORMATION

The following questions are specifically about memberships and information sources.

1 Which of the following are important sources of information for your farm business? **(PROMPT)**

1. Scottish Agricultural College (SAC)

☐
2. Scottish Office Department of Agriculture (SOAFD)

☐
3. National Farmers Union for Scotland (NFUS)

☐
4. Farming and Wildlife Advisory Group (FWAG)

☐
5. Agriculture Training Board (ATB)

☐
6. Scottish Natural Heritage (SNH)

☐
7. Orkney Islands Council (OIC)

☐
8. Orkney Field Club

☐
9. T.V., Radio or Journals

☐
10. Other, please specify

2 Which of the above is the **MOST** important source of information for your farm business? Please rank the top three sources with '1' being the most important.

1. SAC

☐
2. SOAFD

☐
3. NFUS

☐
4. FWAG

☐
5. ATB

☐
6. SNH

☐
7. OIC

☐
8. Orkney Field Club

☐
9. T.V., Radio or Journals

☐
10. Other, please specify

3 Which, if any, of the following newspapers do you read regularly, that is, more than once a month?
(PROMPT)

- 1. Orcadian ☐
- 2. Press and Journal ☐
- 3. Scotsman ☐
- 4. Farmers Weekly ☐
- 5. Scottish Farmer ☐
- 6. Daily Record ☐
- 7. Glasgow Herald ☐
- 8. Dundee Courier ☐
- 9. The Times ☐
- 10. Daily Telegraph ☐
- 11. Daily Express ☐
- 12. Other, please specify

4 Do you watch any farming television programmes?

- 1. yes ☐ please list:

- 2. no ☐

5 Do you listen to any farming radio programmes?

- 1. yes ☐ please list:

- 2. no ☐

6 What is the single most important way that you keep up to date with **new ideas** and developments in farming and land use? (**PROMPT**)

- 1. Scottish Agricultural College (SAC) ☐
- 2. Scottish Office Agriculture Department (SOAFD) ☐
- 3. National Farmers Union for Scotland (NFUS) ☐
- 4. Farming and Wildlife Advisory Group (FWAG) ☐
- 5. Agricultural Training Board (ATB) ☐
- 6. Scottish Natural Heritage (SNH ex-NCC) ☐
- 7. Local Agricultural College ☐
- 8. Media (T.V., radio and newspapers) ☐
- 9. Other farmers, neighbours, family or friends. ☐
- 10. Other ☐

7 Are you a member of any of the following organisations?
has membership been < 5 years or > 5 years

- 1. NFUS ☐
- 2. FWAG ☐
- 3. Scottish Landowners Federation (SLF) ☐
- 4. World Wide Fund for Nature (WWF) ☐
- 5. Royal Society for the Protection of Birds (RSPB) ☐
- 6. Scottish Wildlife Trust (SWT) ☐
- 7. Orkney Field Club ☐
- 8. Any other?, please specify ☐

8a Do you think the local council is involved in farming issues?

1. yes

☐

please comment
2. no

☐
3. don't know

☐

8b Do you think the local council is involved in conservation issues?

1. yes

☐

please comment
2. no

☐
3. don't know

☐

8c Would you say it has any bias towards farming or towards conservation interests? (PROMPT)

1. definitely farming

☐
2. probably farming

☐
3. neutral

☐
4. probably conservation

☐
5. definitely conservation

☐
6. don't know

☐

Please comment.

9 What do you understand by Nature Conservation Policy?

10 Can you name the organisations which represent farming interests?

11 Can you name the organisations which represent landowning interests?

12 Can you name the organisations which represent conservation interests?

13 Which organisation, from those mentioned is the most representative of your interests? **(PROMPT)**

14a How important do you think farming pressure groups are to policy-makers?

- | | | |
|-----------------------|--------------------------|------------------|
| 1. very important | <input type="checkbox"/> | go to 14b |
| 2. quite important | <input type="checkbox"/> | go to 14b |
| 3. important | <input type="checkbox"/> | go to 15 |
| 4. not very important | <input type="checkbox"/> | go to 14c |
| 5. not important | <input type="checkbox"/> | go to 14c |
| 6. don't know | <input type="checkbox"/> | go to 16 |

14b If very important/quite important why do think this is the case?

14c If not very important/not important, why do you think this is the case?

15 Do you think this level of importance has changed over the last five years? **(PROMPT)**

- 1. increased greatly ☐
- 2. increased ☐
- 3. no change ☐
- 4. decreased ☐
- 5. decreased greatly ☐
- 6. don't know ☐

16a How important do you think conservation pressure groups are to policy-makers? **(PROMPT)**

- 1. very important ☐ go to **16b**
- 2. quite important ☐ go to **16b**
- 3. important ☐ go to **17**
- 4. not very important ☐ go to **16c**
- 5. not important ☐ go to **16c**
- 6. don't know ☐ go to **18**

16b If very important/quite important why do think this is the case?

16c If not very important/not important, why do you think this is the case?

17 Do you think this has changed over the last five years? **(PROMPT)**

- 1. increased greatly ☐
- 2. increased ☐
- 3. no change ☐
- 4. decreased ☐
- 5. decreased greatly ☐
- 6. don't know ☐

18 Do you think EU farming /landowning groups represent local Orkney farming/landowning interests? **(PROMPT)**

- 1. all of the time ☐
- 2. most of the time ☐
- 3. sometimes ☐
- 4. never ☐
- 5. don't know ☐

19 Do you think National farming/landowning groups represent local farming/land interests? **(PROMPT)**

- 1. all of the time ☐
- 2. most of the time ☐
- 3. sometimes ☐
- 4. never ☐
- 5. don't know ☐

20 Do you think the conservation interests represented at a national level are typical of local conservation interests? **(PROMPT)**

- 1. all of the time ☐
- 2. most of the time ☐
- 3. sometimes ☐
- 4. never ☐
- 5. don't know ☐

21 Do you think the conservation interests represented at an EU level are typical of local conservation interests? **(PROMPT)**

- 1. all of the time ☐
- 2. most of the time ☐
- 3. sometimes ☐
- 4. never ☐
- 5. don't know ☐

22 Do you think different rural interests (i.e. farming and conservation) are represented in a balanced way to policy-makers? **(PROMPT)**

1. yes

☐
2. no

☐

please comment
3. don't know

☐

23 In your opinion what is a groups (for example, NFUS) most important role?

1. Poviding information to members?

☐
2. Representing members interests by lobbying?

☐
3. Other

24a How effective are they in achieving this? **(PROMPT)**

1. very effective

☐

go to 24b
2. quite effective

☐

go to 24b
3. effective

☐

go to 25
4. not very effective

☐

go to 24c
5. not at all effective

☐

go to 24c
6. don't know

☐

go to 25

24b If very effective/quite effective why do you think so?

24c If not very effective/not at all effective why do you think so?

25 How important do you think Television and Newspapers are in influencing policy-makers decision-making? **(PROMPT)**

1. very important

☐

please discuss
2. quite important

☐

please discuss
3. important

☐

please discuss
4. not very important

☐

please discuss
5. not important

☐

please discuss
6. don't know

☐

26 How important do you think public opinion is in influencing policy-makers decision-making? (PROMPT)

- | | | |
|-----------------------|--------------------------|----------------|
| 1. very important | <input type="checkbox"/> | please discuss |
| 2. quite important | <input type="checkbox"/> | please discuss |
| 3. important | <input type="checkbox"/> | please discuss |
| 4. not very important | <input type="checkbox"/> | please discuss |
| 5. not important | <input type="checkbox"/> | please discuss |
| 6. don't know | <input type="checkbox"/> | |

27 Do you personally think conservation issues in the rest of the U.K. are the same as those in Orkney?

- | | | |
|---------------|--------------------------|----------------|
| 1. yes | <input type="checkbox"/> | |
| 2. no | <input type="checkbox"/> | please comment |
| 3. don't know | <input type="checkbox"/> | |

28 Do you think people in Orkney are as conservation minded as those in the rest of the U.K.

- | | | |
|---------------|--------------------------|----------------|
| 1. yes | <input type="checkbox"/> | please comment |
| 2. no | <input type="checkbox"/> | please comment |
| 3. don't know | <input type="checkbox"/> | |

29 Do you agree or disagree with the following statement: (PROMPT)

The U.K. Government does not have a conservation policy.

- | | |
|----------------------|--------------------------|
| 1. strongly agree | <input type="checkbox"/> |
| 2. agree | <input type="checkbox"/> |
| 3. disagree | <input type="checkbox"/> |
| 4. strongly disagree | <input type="checkbox"/> |
| 5. don't know | <input type="checkbox"/> |

SECTION THREE: SSSIs specifically

The next set of questions are about the designation of SSSIs and their impact.

30a For policy-makers, what is the, MAIN AIM of SSSI legislation? Is it; (PROMPT)

- 1. Conserving natural resources for scientific research ☐
- 2. Conserving natural resources for wildlife and plants ☐
- 3. Conserving landscapes for people and their leisure ☐
- 4. Maintenance of rural incomes ☐
- 5. Meeting public demand for nature reserves ☐
- 6. Other, please specify ☐

30b Do you think this has been achieved?

- 1. yes ☐
- 2. no ☐ please comment
- 3. don't know ☐

31 What would you say, if any, are the main shortcomings of the SSSI policy?

32 Do you have an SSSI designated on your farm?

- 1. Yes ☐ go to question 33
- 2. No ☐ go to question 45

FARMERS WITH SSSIs

33 When was the site on your farm designated? _____

34 For what reason was the site designated?

- 1. Biological ☐
- 2. Geological ☐
- 3. Biological and geological ☐
- 4. Don't know ☐

35 Do you have a management agreement?

- 1. yes ☐ if yes, how long have you had this agreement?
- 2. no ☐

36a Has SSSI designation affected your **annual** farming income?

- 1. yes ☐ go to 36b for increase or 36c for decrease (**PROMPT**)
- 2. no ☐ go to 36d
- 3. don't know ☐

36b Please indicate the amount by which your income has **increased** :

- 1. 0 - £5,000 ☐
- 2. £5,001 - £10,000 ☐
- 3. £10,000 - £20,000 ☐
- 4. more than £20,000 ☐

36c Please indicate the amount by which your income has **decreased**:

- 1. 0 - £5,000 ☐
- 2. £5,001 - £10,000 ☐
- 3. £10,000 - £20,000 ☐
- 4. more than £20,000 ☐

36d *If no effect, do you think your annual farming income will change in the next 5 - 10 years?*

- 1. decrease ☐
- 2. no change ☐
- 3. increase ☐
- 4. don't know ☐

37a *Have you needed to change your farming activities as a result of the designation?*

- 1. yes ☐ go to question 37b
- 2. no ☐ go to question 38a
- 3. don't know ☐

37b. *In what way have you changed your activities?*

38a *Do you think designation has affected your stocking levels?*

- 1. yes ☐ go to question 38b
- 2. no ☐ go to question 38c
- 3. don't know ☐ go to question 39

38b *Generally over the whole period of the designation what is the change in stocking rates?*

38c *If no, is it likely to in the future?*

- 1. yes ☐ if yes, please comment
- 2. no ☐
- 3. don't know ☐

39 Which of the list of *Potentially Damaging Operations* will/has affected your farming operations? **(PROMPT)**

40 Would you say SSSI designation has affected the way you farm outwith the site?

- 1. intensified ☐
- 2. no effect ☐
- 3. extensified ☐
- 4. don't know ☐

41a Do you carry out any unpaid conservation activities on the farm?

- 1. yes ☐ go to **41b**
- 2. no ☐ go to **42**

41b Please say which conservation activities you do.

- 1. Heather control ☐
- 2. Drystone dyking ☐
- 3. Creation of ponds ☐
- 4. Tree planting ☐
- 5. Other, please specify ☐

42a What, if any, aspects of SSSI designation are **beneficial** to you/your farming operations? **(PROMPT)**

- 1. A new interest in nature conservation. ☐
- 2. An increased interest in the farm itself. ☐
- 3. Increased contact with government agencies. ☐
- 4. A potential increase in income ☐
- 5. Other, please specify ☐

42b If any, which of the above do you find the **MOST** beneficial? Please note the number and comment.

43a What, if any, aspects of SSSI designation are **difficult** for you/your farming operations? (**PROMPT**)

1. Perceived loss of control over your own land

☐
2. Legal disputes about finances or rights on your land

☐
3. The time involved in its administration

☐
4. The potential loss in income

☐

Other, please specify

43b If any, which of the above do you find the **MOST** difficult? Please note the number and comment.

44 Do you think the SSSI designation has changed the financial value of your land?

1. increased

☐
2. no effect

☐
3. decreased

☐
4. don't know

☐

The next section is for farmers without SSSI designation

Those with SSSI designation go to Question 51.

FOR THOSE FARMERS WITHOUT SSSI DESIGNATION

45a How would you feel about an SSSI being designated on your farmland? (**PROMPT**)

- | | | |
|------------------|--------------------------|----------------|
| 1. very unhappy | <input type="checkbox"/> | please discuss |
| 2. unhappy | <input type="checkbox"/> | please discuss |
| 3. not bothered | <input type="checkbox"/> | |
| 4. quite pleased | <input type="checkbox"/> | please discuss |
| 5. very pleased | <input type="checkbox"/> | please discuss |
| 6. don't know | <input type="checkbox"/> | |

45b Which, if any of the following, would you consider to be beneficial aspects of SSSI designation to you/your farming operations? (**PROMPT**)

- | | |
|--|--------------------------|
| 1. A chance to develop an interest in nature conservation. | <input type="checkbox"/> |
| 2. An increased interest in the farm itself. | <input type="checkbox"/> |
| 3. Increased contact with government agencies. | <input type="checkbox"/> |
| 4. A potential increase in income | <input type="checkbox"/> |
| Other, please specify | |

45c Which, if any of the following would you consider to be difficult aspects of SSSI designation for you/your farming operations? (**PROMPT**)

- | | |
|---|--------------------------|
| 1. Perceived loss of control over your own land | <input type="checkbox"/> |
| 2. Legal disputes about finances or rights on your land | <input type="checkbox"/> |
| 3. The time involved in its administration | <input type="checkbox"/> |
| 4. The potential loss in income | <input type="checkbox"/> |
| 5. Other, please specify | <input type="checkbox"/> |

46a Do you think SSSI designation would change your annual farming income?

- | | | |
|---------------|--------------------------|---|
| 1. yes | <input type="checkbox"/> | go to 46b for increase, 46c for decrease (PROMPT) |
| 2. no | <input type="checkbox"/> | go to 47 |
| 3. don't know | <input type="checkbox"/> | go to 47 |

46b Please indicate the amount by which you think your income would **increase**.

- | | |
|-------------------------------------|--------------------------|
| 1. 0 - £5,000 | <input type="checkbox"/> |
| 2. £5,001 - £10,000 | <input type="checkbox"/> |
| 3. £10,000 - £20,000 | <input type="checkbox"/> |
| 4. more than £20,000 | <input type="checkbox"/> |
| 5. increase but don't know how much | <input type="checkbox"/> |

46c Please indicate the amount by which you think your income would **decrease**.

- | | |
|-------------------------------------|--------------------------|
| 1. 0 - £5,000 | <input type="checkbox"/> |
| 2. £5,001 - £10,000 | <input type="checkbox"/> |
| 3. £10,000 - £20,000 | <input type="checkbox"/> |
| 4. more than £20,000 | <input type="checkbox"/> |
| 5. decrease but don't know how much | <input type="checkbox"/> |

46d If no effect, do you think it will in the next 5 - 10 years?

- | | |
|------------------|--------------------------|
| 1. yes, decrease | <input type="checkbox"/> |
| 2. no change | <input type="checkbox"/> |
| 3. yes, increase | <input type="checkbox"/> |
| 4. don't know | <input type="checkbox"/> |

47 Do you think SSSI designation would change your stocking rates?

- | | | |
|---------------|--------------------------|----------------|
| 1. yes | <input type="checkbox"/> | please comment |
| 2. no | <input type="checkbox"/> | |
| 3. don't know | <input type="checkbox"/> | |

48 Do you think the SSSI designation would change the financial value of your land?

- 1. increased ☐
- 2. decreased ☐
- 3. stay the same ☐
- 4. don't know ☐

49a Do you carry out any unpaid conservation activities on the farm?

- 1. yes ☐ go to 49b
- 2. no ☐ go to 50

49b Please say which conservation activities you do.

- 1. Heather control ☐
- 2. Drystone dyking ☐
- 3. Creation of ponds ☐
- 4. Tree planting ☐
- 5. Other ☐

50 Do you think SSSI designation affects the way farmers farm their land outwith the site?

- 1. intensify ☐
- 2. no change ☐
- 3. extensify ☐
- 4. don't know ☐

51 As a farmer/landowner which of the following statements do you consider to be the most important to you:
(PROMPT)

1. Maximising your farm business profits

☐
2. Living and working in the countryside

☐
3. Being your own boss

☐
4. Working the land for future generations

☐
5. Other

☐

52a Do you think compensation with management agreements varies amongst landowners?

1. yes

☐

go to 52b
2. no

☐

go to 53
3. don't know

☐

go to 53

52b If yes, would you say the variation is:

1. a great deal

☐
2. not very much

☐

53 Do you think the **legal nature** of SSSIs is detrimental to the aims of the policy?

1. yes

☐

please comment
2. no

☐
3. don't know

☐

54 Do you think a voluntary approach is capable of achieving :

1. the same

☐
2. more than a legal/regulation approach

☐
3. less than a legal/regulation approach

☐
4. don't know

☐

55 Given the move towards conservation what mechanisms would you like to see in place? *(PROMPT)*

1. Land purchase by government

☐
2. Land purchase by voluntary conservation organisations

☐
3. Regulation with compensation limited to a one-off payment

☐
4. Regulation with compensation for an annual payment

☐
5. Voluntary schemes with supervision by a government agency

☐
6. Voluntary schemes with no supervision

☐
7. Don't know

☐
- Other, please specify

56 How would you feel if all farming practices were taken under planning controls (such as building development and access) like other economic activities:

1. leave farming

☐
2. accept it but feel unsatisfied

☐
3. not be bothered

☐
4. other, please comment

57 Do you think there should be an appeals system for all SSSI designations?

1. yes

☐

please comment
2. no

☐

please comment
3. don't know

☐

58 Existing compensation is calculated on income foregone as a result of the designation. Do you think this is the best way?

1. keep existing method

☐
2. give a standard payment to all landowners/farmers

☐
3. some other method, please suggest

☐

59 Do you think farmers should have the right to choose between a one-off payment or annual payments related to the loss of profits?

1. yes ☐

2. no ☐

3. don't know ☐

60 Do you think voluntary conservation groups should be allowed to own land for nature reserves?

1. yes ☐ please comment

2. no ☐

3. don't know ☐

**SECTION FIVE: THE FUTURE FOR CONSERVATION POLICY IN ORKNEY
AND ELSEWHERE IN THE U.K.**

61 Do you consider yourself to be a conservationist?

1. yes

☐

please comment
2. no

☐
3. don't know

☐

The following questions relate to Environmentally Sensitive Area (ESA) designation -

62a Have you heard of it?

1. yes

☐

go to 62
2. no

☐

go to 63
3. don't know

☐

go to 63

62b Do you think ESA is a good policy

1. yes

☐

go to 62c
2. no

☐

go to 63
3. don't know

☐

go to 63

62c What is your main reason for this view? No prompt for initial responses, then prompt:

1. Financial incentives

☐
2. Voluntary approach

☐
3. The 5-10 year plan

☐
4. Other

☐

63 In your opinion does prosperous farming lead to a conservation/ environmentally-friendly approach to farming?

1. yes

☐

Please comment
2. no

☐

Please comment
3. don't know

☐

And finally, a few questions about yourself.

64a *Do you regard yourself as an incomer or a local?*

1. incomer

☐

2. local

☐

64b *Do you think this has any effect on how conservation-minded you are?*

1. yes

☐

please comment

2. no

☐

3. don't know

☐

65a *What is the total acreage of your farm?*

65b *What acreage of this is rough grazing/hill land?*

65c *What acreage is in bye?*

66 *What is the tenure status of the farming operation?*

1. Owner/occupier

☐

2. Tenant

☐

3. Of mixed tenureship
(including leased land)

☐

4. In a limited partnership

☐

67 *What is the farm-type?*

1. Mainly cattle

☐

2. Mainly sheep

☐

3. Sheep and Cattle

☐

4. With arable

☐

5. Other, please specify

68 Please indicate which age band you are in.

- 16-24 ☐
- 25-40 ☐
- 41-50 ☐
- 51-65 ☐
- > 65 ☐

69 Do you expect any of your family to take over from you in actively farming this land?

- 1. yes ☐ Please comment
- 2. no ☐ Please comment
- 3. don't know ☐

70 Did you go to school to the level of:

- 1. 'O' Grades ☐
- 2. 'H' Grades ☐
- 3. Neither ☐

71a Did you go on to further education?

- 1. yes ☐ go to question 71b.
- 2. no ☐

71b Was your further education at:

- 1. College of Further Education ☐
- 2. University or Polytechnic ☐
- 3. School of Agriculture ☐
- 4. Training Courses ☐
- 5. Other

Thank you for your help on completing this questionnaire. Your co-operation has been greatly appreciated.

Do you have any comments you would like to make about any of the issues raised or about the questionnaire itself?

There are two more prompts for the Farmer Questionnaire.

1. What is the name of the newspaper you read most often?

1. *Farmer's Journal* (1910-1911)

2. *Farmer's Journal* (1912-1913)

3. *Farmer's Journal* (1914-1915)

4. *Farmer's Journal* (1916-1917)

5. *Farmer's Journal* (1918-1919)

6. *Farmer's Journal* (1920-1921)

7. *Farmer's Journal* (1922-1923)

8. *Farmer's Journal* (1924-1925)

9. *Farmer's Journal* (1926-1927)

10. *Farmer's Journal* (1928-1929)

Farmer Questionnaire Prompts

1. What is the name of the newspaper you read most often?

1. *Farmer's Journal*

2. *Farmer's Journal*

3. *Farmer's Journal*

4. *Farmer's Journal*

5. *Farmer's Journal*

6. *Farmer's Journal*

7. *Farmer's Journal*

8. *Farmer's Journal*

9. *Farmer's Journal*

10. *Farmer's Journal*

11. *Farmer's Journal*

12. *Farmer's Journal*

The prompts have been condensed for the purposes of the Appendix.

1 Which of the following are important sources of information for your farm business?

1. Scottish Agricultural College (SAC)
2. Scottish Office Department of Agriculture (SOAFD)
3. National Farmers Union for Scotland (NFUS)
4. Farming and Wildlife Advisory Group (FWAG)
5. Agriculture Training Board (ATB)
6. Scottish Natural Heritage (SNH)
7. Orkney Islands Council (O.I.C.)
8. Orkney Field Club
9. T.V. Radio or journals
10. Other, please specify

3 Which, if any, of the following newspapers do you read regularly, that is, more than once a month?

1. Orcadian
2. Press and Journal
3. Scotsman
4. Farmers Weekly
5. Scottish Farmer
6. Daily Record
7. Glasgow Herald
8. Dundee Courier
9. The Times
10. Daily Telegraph
11. Daily Express
12. Other, please specify

6 What is the single most important way that you keep up to date with *new ideas* and developments in farming and land use?

- 1.Scottish Agricultural College (SAC)
- 2. Scottish Office Agriculture Department (SOAFD)
- 3. National Farmers Union for Scotland (NFUS)
- 4. Farming and Wildlife Advisory Group (FWAG)
- 5. Agricultural Training Board (ATB)
- 6. Scottish Natural Heritage (SNH ex-NCC)
- 7. Local Agricultural College
- 8. Media (T.V. Radio and newspapers)
- 9. Other farmers, neighbours, family or friends.
- 10. Other

8c Would you say it (Orkney Islands Council) has any bias towards farming or towards conservation interests?

1	2	3	4	5	6
Definitely farming	Probably farming	Neutral	Probably conservation	Definitely conservation	Don't know

14a *How important do you think farming pressure groups are to policy-makers?*

1	2	3	4	5	6
Very important	Quite important	Important	Not very important	Not at all important	Don't know

15 *Do you think this level of importance has changed over the last five years?*

1	2	3	4	5	6
Decreased greatly	Decreased	No change	Increased	Increased greatly	Don't know

16a *How important do you think conservation pressure groups are to policy-makers?*

1	2	3	4	5	6
Very important	Quite important	Important	Not very important	Not at all important	Don't know

17 *Do you think this level of importance has changed over the last five years?*

1	2	3	4	5	6
Decreased greatly	Decreased	No change	Increased	Increased greatly	Don't know

18 Do you think EU farming /landowning groups represent local Orkney farming/landowning interests?

1	2	3	4	5
All of the time	Most of the time	Sometimes	Never	Don't know

19 Do you think National farming/landowning groups represent local farming/land interests?

1	2	3	4	5
All of the time	Most of the time	Sometimes	Never	Don't know

20 Do you think the conservation interests represented at a national level are typical of local conservation interests?

1	2	3	4	5
All of the time	Most of the time	Sometimes	Never	Don't know

21 Do you think the conservation interests represented at an EU level are typical of local conservation interests?

1	2	3	4	5
All of the time	Most of the time	Sometimes	Never	Don't know

24a *How effective are they in achieving this?*

1	2	3	4	5	6
Not at all effective	Quite effective	Effective	Not very effective	Very effective	Don't know

25 *How important do you think Television and Newspapers are in influencing policy-makers decision-making?*

1	2	3	4	5	6
Very important	Quite important	Important	Not very important	Not at all important	Don't know

26 *How important do you think public opinion is in influencing policy-makers decision-making?*

1	2	3	4	5	6
Very important	Quite important	Important	Not very important	Not at all important	Don't know

29 *Do you agree or disagree with the following statement:*

The U.K. Government does not have a conservation policy.

1	2	3	4	5
Strongly disagree	Agree	Disagree	Strongly disagree	Don't know

30a For policy-makers, what is the, MAIN AIM of SSSI legislation? Is it;

1. Conserving natural resources for scientific research
2. Conserving natural resources for wildlife and plants
3. Conserving landscapes for people and their leisure
4. Maintenance of rural incomes
5. Meeting public demand for nature reserves
6. Other, please specify

FOR FARMERS WITH SSI DESIGNATION

36 Please indicate the amount by which your income has been affected:

1. 0 - £5,000
2. £5,001 - £10,000
3. £10,000 - £20,000
4. more than £20,000

39 Which of the list of *Potentially Damaging Operations* will/has affected your farming operations?

1. Cultivation.
2. The introduction of grazing and changes in the grazing regime.
3. The introduction of stock feeding and changes in stock feeding practice.
4. Application of manure, fertilisers and lime.
5. Application of pesticides, including herbicides (weedkillers).
6. Dumping, spreading or discharge of any materials.
7. Burning and changes in the pattern or frequency of burning, except in the immediate vicinity of worked peats banks to facilitate working and drying.
8. Drainage.
9. Modification of the structure of water courses.
10. The changing of the structure of water levels and tables and water utilisation.
11. Infilling of drains, ponds, pools and marshes.
12. Cutting of peat by machine.
13. Construction of roads, tracks, walls, fences, hardstands, banks etc.
14. The use of vehicles or craft likely to damage features of interest.
15. Recreational activities likely to damage peatland, vegetation or birds, including research and educational use.

42a What, if any, aspects of SSSI designation are *beneficial* to you in your farming operations?

1. A new interest in nature conservation.
2. An increased interest in the farm itself.
3. Increased contact with government agencies.
4. A potential increase in income
5. Other, please specify

43a *What, if any, aspects of SSSI designation are **difficult** for you in your farming operations?*

1. Perceived loss of control over your own land
2. Legal disputes about finances or rights on your land
3. The time involved in its administration
4. The potential loss in income
5. Other, please specify

FOR THOSE FARMERS WITHOUT SSSI DESIGNATION

45a *How would you feel about an SSSI being designated on your farmland?*

1	2	3	4	5	6
Very unhappy	Quite unhappy	Not bothered	Quite pleased	Very pleased	Don't know

45b *Which, if any of the following, would you consider to be beneficial aspects of SSSI designation to you in your farming operations?*

1. A chance to develop an interest in nature conservation.
 2. An increased interest in the farm itself.
 3. Increased contact with government agencies.
 4. A potential increase in income
- Other, please specify

45c Which, if any of the following would you consider to be difficult aspects of SSSI designation for in your farming operations?

1. Perceived loss of control over your own land
2. Legal disputes about finances or rights on your land
3. The time involved in its administration
4. The potential loss in income

Other, please specify

46 Please indicate the amount by which you think your income would change.

1. 0 - £5,000
2. £5,001 - £10,000
3. £10,000 - £20,000
4. more than £20,000
5. increase but don't know how much

FOR ALL FARMERS

51 As a farmer/landowner which of the following statements do you consider to be the most important to you:

1. Maximising your farm business profits
2. Living and working in the countryside
3. Being your own boss
4. Working the land for future generations
5. Other

55 *Given the move towards conservation what mechanisms would you like to see in place?*

1. Land purchase by government
2. Land purchase by voluntary conservation organisations
3. Regulation with compensation limited to a one-off payment
4. Regulation with compensation for an annual payment
5. Voluntary schemes with supervision by a government agency
6. Voluntary schemes with no supervision
7. Don't know

Other, please specify

The Local Organisation Questionnaire.

Confidential

The local organisation questionnaire was altered according to the respondent. This questionnaire was prepared for the RSPB. No prompts were used as respondents were more familiar with the format of questions and the subject matter.

SECTION ONE : MEMBERSHIP AND INFORMATION

1 Which of the following are important sources of information for you in your work associated with land use and nature conservation?

- | | |
|--|--------------------------|
| 1. Scottish Office Department of Agriculture (SOAFD) | <input type="checkbox"/> |
| 2. Orkney Islands Council (OIC) | <input type="checkbox"/> |
| 3. National Farmers Union for Scotland (NFUS) | <input type="checkbox"/> |
| 4. Crofters Commission (CC) | <input type="checkbox"/> |
| 5. Farming and Wildlife Advisory Group (FWAG) | <input type="checkbox"/> |
| 6. Agricultural Training Board (ATB) | <input type="checkbox"/> |
| 7. Scottish Natural Heritage (SNH) | <input type="checkbox"/> |
| 8. Scottish Agricultural College (SAC) | <input type="checkbox"/> |
| 9. Orkney Field Club | <input type="checkbox"/> |
| 10. Television | <input type="checkbox"/> |
| 11. Radio | <input type="checkbox"/> |
| 12. Journals or magazines | <input type="checkbox"/> |
| 13. Other, please specify | |

2 Which of the above is the **MOST** important source of information? Please rank the top three sources with '1' being the most important.

- | | |
|-----------------------------|--------------------------|
| 1. SOAFD | <input type="checkbox"/> |
| 2. OIC | <input type="checkbox"/> |
| 3. NFUS | <input type="checkbox"/> |
| 4. Crofters Commission (CC) | <input type="checkbox"/> |
| 5. FWAG | <input type="checkbox"/> |
| 6. ATB | <input type="checkbox"/> |

- 7. SNH ☐
- 8. SAC ☐
- 9. Orkney Field Club ☐
- 10. Television ☐
- 11. Radio ☐
- 12. Journals or magazines ☐
- 13. Other, please specify ☐

3 *Where does RSPB obtain information on the application and development of National U.K. policies? (tick as appropriate).*

- 1. U.K. civil servant ☐
- 2. U.K. government minister ☐
- 3. House of Lords Select Committee ☐
- 4. Member of Parliament ☐
- 5. P.R. Agency ☐
- 6. Independent Consultant ☐
- 7. Dept of Environment ☐
- 8. M.A.F.F. ☐
- 9. Journals/news ☐
- 10. Other, please specify ☐
- 11. None ☐

4 *Where does RSPB obtain information on the application and development of EU policies?*

- 1. U.K. civil servant ☐
- 2. U.K. government minister ☐
- 3. House of Lords Select Committee ☐

4. Member of Parliament ☐
5. P.R. Agency ☐
6. Independent Consultant ☐
7. Member of Euro Parliament ☐
8. Member of Economic and Social Committee ☐
9. E.C. Commission ☐
10. Euro pressure group (which one) ☐
11. Dept. of Environment ☐
12. M.A.F.F. ☐
13. Journals/news ☐
14. Other, please specify ☐
15. None ☐

5. *What is the single most important way that you keep up to date with **new ideas** and developments in farming and land use?*

1. S.O.A.F.D. ☐
2. OIC ☐
3. NFUS ☐
4. Crofters Commission ☐
5. S.A.C. ☐
5. Farming and Wildlife Advisory Group (FWAG) ☐
6. Agricultural Training Board (ATB) ☐
7. Scottish Natural Heritage (SNH) ☐
8. Local Agricultural College ☐
9. Television ☐
10. Radio ☐
11. Newspapers ☐

12. Other farmers, neighbours, family or friends.

☐

13. Other, please specify

6 What is the local membership of the RSPB?

This following question is trying to understand the 'network', that is, the linkages between the following local organisations.

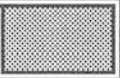

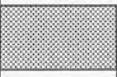

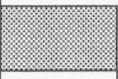
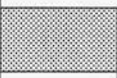
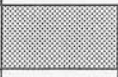


7a Do you think the following groups are in **regular** contact with one another? Please indicate by **ticking** the relevant box on the matrix.

7b Please indicate the **strongest working relations** in your opinion by **circling** the box. Why do you think this is the case?

7c Please indicate by using a **cross** any **difficult relations**, if any, between the above local organisations. Why do you think this is the case?

7d For those which you think have **no relationship**, please write 'NR'.

7e If there are any relationships you **don't know** about please leave **blank**.

SOAFD									
SAC									
NFUS									
C.C.									
FWAG									
ATB									
SNH									
RSPB									
OIC									
	SOAFD	SAC	NFUS	C.C.	FWAG	ATB	SNH	RSPB	OIC

8a Do you think OIC is involved in farming issues?

1. yes ☐ please comment

2. no ☐

3. don't know ☐

8b Do you think the OIC is involved in conservation issues?

1. yes ☐ please comment

2. no ☐

3. don't know ☐

8c Would you say it has any bias towards farming or towards conservation interests?

1. Definitely farming ☐

2. Probably farming ☐

3. Don't know ☐

4. Probably conservation ☐

5. Definitely conservation ☐

Please comment.

SECTION TWO: CONSERVATION AND POLICY-MAKING IN THE U.K.

9 *What do you understand by the U.K. governments 'Nature Conservation Policy'?*

10 *Can you name the organisations which represent farming interests?*
(National and local)

11 *Can you name the organisations which represent landowning interests?*
(National and local)

12 *Can you name the organisations which represent conservation interests?*
(National and local)

13a *How important do you think farming/landowning pressure groups are to policy-makers?*

- | | | |
|-----------------------|--------------------------|------------------|
| 1. very important | <input type="checkbox"/> | go to 13b |
| 2. quite important | <input type="checkbox"/> | go to 13b |
| 3. important | <input type="checkbox"/> | go to 14 |
| 4. not very important | <input type="checkbox"/> | go to 13c |
| 5. not important | <input type="checkbox"/> | go to 13c |
| 6. don't know | <input type="checkbox"/> | go to 14 |

13b *If very important/important why do think this is the case?*

13c *If not very important/not important at all, why do you think this is the case?*

14 *Do you think this level of importance has changed over the last five years?*

- | | |
|----------------------|--------------------------|
| 1. increased greatly | <input type="checkbox"/> |
| 2. increased | <input type="checkbox"/> |
| 3. no change | <input type="checkbox"/> |
| 4. decreased | <input type="checkbox"/> |
| 5. decreased greatly | <input type="checkbox"/> |
| 6. don't know | <input type="checkbox"/> |

15a *How important do you think conservation pressure groups are to policy-makers?*

- | | | |
|-----------------------|--------------------------|-----------|
| 1. very important | <input type="checkbox"/> | go to 15b |
| 2. quite important | <input type="checkbox"/> | go to 15b |
| 3. important | <input type="checkbox"/> | go to 16 |
| 4. not very important | <input type="checkbox"/> | go to 15c |
| 5. not important | <input type="checkbox"/> | go to 15c |
| 6. don't know | <input type="checkbox"/> | go to 16 |

15b *If very important/important why do think this is the case?*

15c *If not very important/not important, why do you think this is the case?*

16 Do you think this has changed over the last five years?

- 1. increased greatly ☐
- 2. increased ☐
- 3. no change ☐
- 4. decreased ☐
- 5. decreased greatly ☐
- 6. don't know ☐

17 Do you think EU farming /landowning groups represent local Orkney farming/landowning interests?

- 1. all of the time ☐
- 2. most of the time ☐
- 3. sometimes ☐
- 4. never ☐
- 5. don't know ☐

18 Do you think National farming/landowning groups represent local farming/land interests?

- 1. all of the time ☐
- 2. most of the time ☐
- 3. sometimes ☐
- 4. never ☐
- 5. don't know ☐

19a Do you think, in general, the conservation interests represented at a national level are typical of local conservation interests?

- 1. all of the time ☐
- 2. most of the time ☐
- 3. sometimes ☐
- 4. never ☐
- 5. don't know ☐

19b Do you think specifically within your organisation the **conservation interests** represented at a **national** level are typical of **local** conservation interests?

- 1. all of the time ☐
- 2. most of the time ☐
- 3. sometimes ☐
- 4. never ☐
- 5. don't know ☐

20 Do you think the **conservation interests** represented at an **EU** level are typical of **local** conservation interests?

- 1. all of the time ☐
- 2. most of the time ☐
- 3. sometimes ☐
- 4. never ☐
- 5. don't know ☐

21 Do you think specifically within your organisation the **conservation interests** represented at an **EU** level are typical of **local** conservation interests?

- 1. all of the time ☐
- 2. most of the time ☐
- 3. sometimes ☐
- 4. never ☐
- 5. don't know ☐

22 Do you think different rural interests (i.e. farming and conservation) are represented in a balanced way to policy-makers?

- 1. yes ☐
- 2. no ☐
- 3. don't know ☐

please comment

23 In your opinion what is a groups (for example, NFUS) most important role?

- 1. providing information to members?
- 2. representing members interests by lobbying?
- 3. other

☐

☐

24a How effective are they in achieving this?

- | | | |
|-------------------------|--------------------------|-----------|
| 1. not at all effective | <input type="checkbox"/> | go to 24b |
| 2. not very effective | <input type="checkbox"/> | go to 24b |
| 3. effective | <input type="checkbox"/> | go to 25 |
| 4. quite effective | <input type="checkbox"/> | go to 24c |
| 5. very effective | <input type="checkbox"/> | go to 24c |
| 6. don't know | <input type="checkbox"/> | go to 25 |

24b If very effective/quite effective why do you think so?

24c If not very effective/not at all effective why do you think so?

25 How important do you think *Television and Newspapers* are in influencing *policy-makers decision-making*?

- | | | |
|-----------------------|--------------------------|----------------|
| 1. very important | <input type="checkbox"/> | please discuss |
| 2. quite important | <input type="checkbox"/> | please discuss |
| 3. important | <input type="checkbox"/> | please discuss |
| 4. not very important | <input type="checkbox"/> | please discuss |
| 5. not important | <input type="checkbox"/> | please discuss |
| 6. don't know | <input type="checkbox"/> | |

26 How important do you think **public opinion** is in influencing **policy-makers decision-making**?

- | | | |
|-----------------------|--------------------------|----------------|
| 1. very important | <input type="checkbox"/> | please discuss |
| 2. quite important | <input type="checkbox"/> | please discuss |
| 3. important | <input type="checkbox"/> | please discuss |
| 4. not very important | <input type="checkbox"/> | please discuss |
| 5. not important | <input type="checkbox"/> | please discuss |
| 6. don't know | <input type="checkbox"/> | |

27 Do you personally think conservation issues in the rest of the U.K. are the same as those in Orkney?

- | | | |
|---------------|--------------------------|----------------|
| 1. yes | <input type="checkbox"/> | |
| 2. no | <input type="checkbox"/> | please comment |
| 3. don't know | <input type="checkbox"/> | |

28 Do you think people in Orkney are as conservation minded as those in the rest of the UK

- | | | |
|---------------|--------------------------|----------------|
| 1. yes | <input type="checkbox"/> | please comment |
| 2. no | <input type="checkbox"/> | please comment |
| 3. don't know | <input type="checkbox"/> | |

29 Please list any of the following channels whereby, as a branch officer, you are kept in touch with the local community views?

- 1. Letters and telephone calls from individuals (members and non-members included)
- 2. Community council meeting representations by RSPB.
- 3. RSPB local meetings.
- 4. Any other, please specify

30 Do you have any difficulty in **representing the interests of Orkney** within the **Scottish Office**?

If yes, was this through

- 1. A lack of interest by the Orkney RSPB in Scottish Office policymaking;
- 2. A lack of access to, or representation on Scottish Office committees;
- 3. A lack of **formal** contacts with Scottish Office officials;
- 4. A lack of **informal** contacts with Scottish Office officials;

- 5. A lack of available and up-to-date information on Scottish Office nature conservation policies;
- 6. Other, please specify

31 *As a geographically remote branch of the RSPB do you consider you have a fair say within the national RSPB structure?*

- 1. all of the time ☐
- 2. most of the time ☐
- 3. sometimes ☐
- 4. never ☐
- 5. don't know ☐

32 *Please list any of the following channels whereby, as a branch officer, you are kept in touch with the local community views?*

- 1. Letters and telephone calls from individuals (members and non-members included)
- 2. Community council meeting representations by RSPB.
- 3. RSPB local meetings.
- 4. Any other, please specify

33 *Do you have any difficulty in **representing the interests of Orkney** within the **Scottish Office**?*

If yes, was this through

- 1. A lack of interest by the Orkney RSPB in Scottish Office policymaking;
- 2. A lack of access to, or representation on Scottish Office committees;
- 3. A lack of **formal** contacts with Scottish Office officials;
- 4. A lack of **informal** contacts with Scottish Office officials;
- 5. A lack of available and up-to-date information on Scottish Office nature conservation policies;
- 6. Other, please specify

34 Do you have any difficulty in *representing the interests of Orkney at a national (Westminster/Whitehall) level?*

If yes, was this through

- 1. A lack of interest by the Orkney RSPB in National U.K. policymaking;
- 2. A lack of access to, or representation on Whitehall committees;
- 3. A lack of **formal** contacts with Whitehall officials;
- 4. A lack of **informal** contacts with Whitehall officials;
- 5. A lack of available and up-to-date information on National U.K. nature conservation policies;
- 6. Other, please specify

35 Do you have any difficulty in *representing the interests of Orkney at an EU level?*

If yes, was this through

- 1. A lack of interest by the Orkney RSPB in EU policymaking;
- 2. A lack of access to, or representation on EU select committees;
- 3. A lack of **formal** contacts with EU officials;
- 4. A lack of **informal** contacts with EU officials;
- 5. A lack of available and up-to-date information on EU nature conservation policies;
- 6. Other, please specify

36 Following *reorganisation of the NCC do you think there has been a devolution of decision-making to local agencies?*

- | | | |
|---------------|--------------------------|---|
| 1. yes | <input type="checkbox"/> | Please comment |
| 2. no | <input type="checkbox"/> | Is there likely to be a change in the future? |
| 3. don't know | <input type="checkbox"/> | |

37 Do you agree or disagree with the following statement:

The U.K. Government does not have a nature conservation policy.

- | | |
|----------------------|--------------------------|
| 1. strongly agree | <input type="checkbox"/> |
| 2. agree | <input type="checkbox"/> |
| 3. disagree | <input type="checkbox"/> |
| 4. strongly disagree | <input type="checkbox"/> |
| 5. don't know | <input type="checkbox"/> |

Please comment

SECTION THREE: SSSIs

The next set of questions are about the designation of SSSIs and their impact.

38 Do you think the **MAIN AIM** of SSSIs has been achieved?

- | | | |
|---------------|--------------------------|----------------|
| 1. yes | <input type="checkbox"/> | |
| 2. no | <input type="checkbox"/> | please comment |
| 3. don't know | <input type="checkbox"/> | |

39 What would you say, if any, are the **main** shortcomings of the SSSI policy?

40 What changes would you like to see made to the existing system? (e.g. in the administration or compensation)

41 What do you think of the idea of having sites of special scientific interest? (specifically the **concept** rather than the administration or compensation)

42 Do you think **LANDOWNERS/FARMERS** should be compensated for any loss in income associated with an SSSI?

- | | | |
|---------------|--------------------------|----------------|
| 1. yes | <input type="checkbox"/> | |
| 2. no | <input type="checkbox"/> | please comment |
| 3. don't know | <input type="checkbox"/> | |

43 Do you think SSSI designation changes the financial value of farmland?

- 1. increased ☐
- 2. no effect ☐
- 3. decreased ☐
- 4. don't know ☐

44 Do you think SSSI designation affects the way farmers farm their land outwith the site?

- 1. intensify ☐
- 2. no change ☐
- 3. extensify ☐
- 4. don't know ☐

SECTION FOUR: PROPERTY RIGHTS

45 Do you think the system of compensation for SSSIs is *fair*?

- 1. very fair ☐
- 2. quite fair ☐
- 3. not very fair ☐
- 4. not at all fair ☐
- 5. don't know ☐

46a Do you think compensation with management agreements varies amongst landowners?

- 1. yes ☐ go to 45a
- 2. no ☐ go to 47
- 3. don't know ☐ go to 47

46b If yes, would you say the variation is:

- 1. a great deal ☐
- 2. not very much ☐
- 3. don't know ☐

47 Do you think the **legal nature** of SSSIs is detrimental to the aims of the policy?

- 1. yes ☐ please comment
- 2. no ☐
- 3. don't know ☐

48 Do you think a voluntary approach to nature conservation is capable of achieving :-

- 1. the same ☐
- 2. more than a legal/regulation approach ☐
- 3. less than a legal/regulation approach ☐
- 4. don't know ☐

49 Given the move towards conservation which, if any, of the following mechanisms would you like to see in place?

- 1. land purchase by government ☐
- 2. land purchase by voluntary conservation organisations ☐
- 3. regulation with compensation limited to a one-off payment ☐
- 4. regulation with compensation for an annual payment ☐
- 5. voluntary schemes with supervision by a government agency ☐
- 6. voluntary schemes with no supervision ☐
- 7. don't know ☐

Other, please specify

50 Do you think all farming practices should be taken under planning controls (such as building development and access) like other economic activities:

- 1. yes ☐
- 2. no ☐
- 3. don't know ☐
- 4. other, please comment ☐

51 Do you think there should be an appeals system for all SSSI designations?

- 1. yes ☐ please comment
- 2. no ☐ please comment
- 3. don't know ☐

52 Existing compensation is calculated on income foregone as a result of the designation. Do you think this is the best way?

- 1. keep existing method ☐
- 2. have a standard payment for all landowners/farmers ☐
- 3. some other method, please suggest

53 Do you think farmers should have the right to choose between a one-off payment or annual payments related to the loss of profits?

- 1. yes ☐
- 2. no ☐
- 3. don't know ☐

54 Do you think voluntary conservation groups should be allowed to own land for nature reserves?

- 1. yes ☐ please comment
- 2. no ☐ please comment
- 3. don't know ☐

SECTION FIVE: THE FUTURE FOR CONSERVATION POLICY IN ORKNEY AND ELSEWHERE IN THE U.K.

The following questions relate to Environmentally Sensitive Area (ESA) designation -

55 *Do you think ESA is a good policy*

- | | | |
|---------------|--------------------------|----------|
| 1. yes | <input type="checkbox"/> | go to 56 |
| 2. no | <input type="checkbox"/> | go to 58 |
| 3. don't know | <input type="checkbox"/> | go to 58 |

56 *What is your **main reason** for this view? No prompt for initial responses, then prompt:*

- | | |
|-------------------------|--------------------------|
| 1. financial incentives | <input type="checkbox"/> |
| 2. voluntary approach | <input type="checkbox"/> |
| 3. the 5-10 year plan | <input type="checkbox"/> |
| 4. other | |

57 *Why do you think Orkney missed out on the last round of ESA designation?*

58 *In your opinion does prosperous farming lead to a conservation/environmentally-friendly approach to farming?*

- | | | |
|---------------|--------------------------|----------------|
| 1. yes | <input type="checkbox"/> | Please comment |
| 2. no | <input type="checkbox"/> | Please comment |
| 3. don't know | <input type="checkbox"/> | |

59 *Do you think the number of incomers to Orkney has any effect on the nature conservation movement in Orkney? If yes, please comment.*

Thank you for your help on completing this questionnaire. Your co-operation has been greatly appreciated.

Do you have any comments you would like to make about any of the issues raised or about the questionnaire itself?

Interview

See page 200 for details

Interviews with Policy-makers

1. *Interviews with policy-makers* are a key part of the research process and can provide valuable insights into the policy-making process.

2. *Where do you obtain information about policy-makers and their views on the policy?*

3. *Where do you obtain information about the views of policy-makers on the policy?*

4. *What is the single most important factor in the development of policy-makers' views on the policy?*

Interviews with Policy-makers

5. *Where do you obtain information about policy-makers and their views on the policy?*

6. *Where do you obtain information?*

7. *Where do you obtain information?*

8. *Where do you obtain information?*

9. *Where do you obtain information?*

10. *Where do you obtain information?*

11. *Where do you obtain information about policy-makers and their views on the policy?*

12. *Where do you obtain information?*

13. *Where do you obtain information?*

Agenda for Policy-maker Interviews

1. *Interviews with policy-makers* are a key part of the research process and can provide valuable insights into the policy-making process.

2. *Where do you obtain information about policy-makers and their views on the policy?*

3. *Where do you obtain information about the views of policy-makers on the policy?*

4. *What is the single most important factor in the development of policy-makers' views on the policy?*

5. *Where do you obtain information about policy-makers and their views on the policy?*

6. *Where do you obtain information about the policy-making process?*

7. *Where do you obtain information about policy-makers and their views on the policy?*

8. *Where do you obtain information about policy-makers and their views on the policy?*

9. *Where do you obtain information about policy-makers and their views on the policy?*

10. *Where do you obtain information about policy-makers and their views on the policy?*

SECTION ONE: INFORMATION

- 1 *Important sources of information for you in your work associated with land use and nature conservation in Scotland?*
- 2 *Where do you obtain information on the application and development of national UK policies?*
- 3 *Where do you obtain information on the application and development of EU policies?*
- 4 *What is the single most important way that you keep up to date with new ideas and developments in farming and nature conservation?*

SECTION TWO: POLICY-MAKING

5 *Please rank the following main arenas of policy-making in terms of influence with respect to the 1990 reorganisation of the NCC.*

1. Government departments
2. Political parties
3. House of Commons
4. House of Lords
5. Interest groups
6. Public arena (media, public opinion)
7. International arena
8. European Union

6 *If interest groups are considered important please indicate which groups and rank in order of influence.*

7 *How receptive/accessible are UK and EU government departments to interest groups?*

8 *Where do the closest links lie - which groups and which departments?*

9 *What do you perceive to be the trend for the balance of power between conservation and agriculture interest groups?*

10 *How does the Treasury allocate its budget for nature conservation ?*

11 *Do you agree or disagree with the following statement:*

The UK government does not have a comprehensive nature conservation policy.

12 *In your own opinion, what is an interest group's most important role? Discuss their effectiveness in this role.*

13 *How important do you think TV and newspapers are in influencing policy-makers decision-making?*

14 *How important do you think TV and Newspapers in influencing public opinion?*

15 *How important do you think public opinion is in influencing policy-makers decision-making?*

SECTION THREE: POLICY REFORM

16 *Does the UK government tend to be proactive or reactive to policy change. How does this contrast with the EU?*

17 *Do you see any need for reform of existing nature conservation legislation? If so, then what reform*

18 *What do you see as the main constraint to such reform?*

19 *Where did the push for change come from in the reorganisation of the NCC?*

SECTION FOUR: SSSIs

20 *Do you think the main aim of SSSI legislation has been achieved?*

21 *Do you think farmers and landowners should be compensated for any loss in income associated with an SSSI?*

22 *Do you think SSSI designation changes the financial value of farmland?*

23 *Do you think SSSI designation affects the way farmers farm their land outwith the site?*

24 *Do you think the system of compensation for SSSIs is fair?*

25 *Existing compensation is calculated on income foregone as a result of the designation. Do you think this is the best way? (Keep existing method; have a standard payment for all landowners; some other method).*

26 *Do you think the legal nature of SSSIs is detrimental to the aims of the policy?*

27 *Do you think a voluntary approach to nature conservation is capable of achieving the same or more or less than a legal approach?*

28 *Do you think there should be an appeals system for all SSSI designations?*

SECTION FIVE: GENERAL POLICY

29 *Do you think all farming practices (such as building development and access) should be taken under planning controls?*

30 *Do you think ESA is a good policy?*

SECTION SIX: EUROPEAN DIMENSION

31 *How significant is the European input into nature conservation policy-making in the UK?*

32 *Is land use seen as a national issue. To what extent is the EU law on nature conservation enforced?*

33 *What do you anticipate the impact of the new EU Species and Habitats Directive to be?*

The χ^2 Test

The following is the procedure for determining whether or not the observed frequencies differ significantly from the expected frequencies. The expected frequencies are calculated by assuming that the null hypothesis is true.

TABLE 1. Expected frequencies for the data in Table 1. The expected frequencies are calculated by assuming that the null hypothesis is true.

Category	Observed	Expected	Dev. Sq.
Control	12	10	4
Treated	18	10	64
Total frequency	30	20	
Exp. freq.	10	10	
Treatment	10	10	

Appendix IV: The χ^2 Test

Statistical significance tests are used to determine if the observed frequencies differ significantly from the expected frequencies. The expected frequencies are calculated by assuming that the null hypothesis is true.

Multiply the total number by the relative frequency of the observed frequencies. The expected frequencies are then calculated by assuming that the null hypothesis is true. The observed frequencies are then compared to the expected frequencies using the χ^2 statistic.

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

The \sum sign is used twice to indicate that the whole table has been summed. The number of columns is indicated by the number of rows, the degree of freedom is

$$df = (r - 1)(c - 1)$$

then χ^2 is referred to Table 1 to find the probability for the null hypothesis being rejected.

The χ^2 Test

The following table displays how two characteristics depend on each other: farmer income and SSSI designation. To test the null hypothesis of no dependence the χ^2 test of independence can be used.

Table II.1 Population frequencies for Orkney farmers where income and SSSI designation are independent
(Null hypothesis, H_0).

<u>Income</u>	<u>SSSI</u>	<u>No SSSI</u>	<u>Total frequency</u>
Effect	15	18	33
No effect	22	4	26
Total frequency	37	22	59
Relative frequency	1/2	1/2	

Statistical independence means that the perceived effect on income should be the same whether the respondent had an SSSI or not.

Multiply the Total column by 0.5 (the relative frequency) since 50% of the observations are with SSSIs. The expected frequencies E shown above can thus be obtained and compared to the observed frequencies O using the χ^2 statistic.

$$\chi^2 = \sum \sum \frac{(O-E)^2}{E}$$

The \sum sign is used twice to indicate that the whole table has been summed. Let c denote the number of columns in the table, and r the number of rows, the degrees of freedom are

$$\text{d.f.} = (c-1)(r-1)$$

then χ^2 is referred to Table II.1 to find the prob-value for the null hypothesis (independence).

<u>Observed frequencies (O)</u>		<u>Expected frequencies (E)</u>	
15	18	20.69	12.31
22	4	16.31	9.69
<u>Deviations (O-E)</u>		<u>(O-E)²/E</u>	
-5.69	5.69	1.5648188	2.630065
5.69	-5.69	1.985046	3.34200
		Sum = 9.52	

$$\text{d.f.} = (2-1)(2-1) = 1.$$

From Table II.1, row 1, the observed χ^2 value of 9.52 lies beyond $\chi^2_{.05}$. Thus the probvalue < .05.

The probvalue is so low (that is, the probability of dependence occurring by chance is very low) that the null hypothesis must be rejected. That is, this test established the dependence of Orkney farmer's perceived effect on income, on SSSI designation.

(χ^2 Critical Points, Wonnacott and Wonnacott, 1982. Table VII p.352)

Appendix V: Interest group Profile

Appendix V: Interest group Profile

Interest group Profile

Scottish interest groups

	Abbreviation
National Farmers Union for Scotland	NFUS
National Trust for Scotland	NTS
Scottish Conservation Projects	SCP
Scottish Crofters Union	SCU
Scottish Landowners Federation	SLF
Scottish Wildlife and Countryside Link	SWCL
Scottish Wildlife Trust	SWT

UK groups with a Scottish office

Farming and Wildlife Advisory Group(UK)	FWAG(UK)
Friends of the Earth UK	FoE(UK)
Ramblers Association	Ramblers
Royal Society for the Protection of Birds	RSPB
World Wide Fund for Nature	WWF

English or UK interest groups

British Trust for Conservation Volunteers	BTCV
Council for the Protection of Rural England	CPRE
Countryside Landowners Association	CLA
County Wildlife Trusts	
Greenpeace UK	
National Farmers Union	NFU
National Trust	NT
Royal Society for Nature Conservation	RSNC
Wildlife and Countryside Link	WCL (or W&C Link)

BRITISH TRUST FOR CONSERVATION VOLUNTEERS involves a wide cross section of the community in practical conservation work for both public and private landowners in England and Wales. Training courses in conservation skills are run.

COUNTRYSIDE LANDOWNERS ASSOCIATION is the English equivalent of the Scottish Landowners Federation. CLA exerts political pressure and provides professional advice and services for its landowning members.

COUNCIL FOR PROTECTION OF RURAL ENGLAND seeks to enhance the beauty of the countryside by influencing decision-makers in the EU, Parliament, government and local authorities. It is a promotional group with semi-official watchdog status to protect the English countryside.

COUNTY WILDLIFE TRUSTS promote nature conservation through buying or managing nature reserves in England. RSNC is the umbrella organisation for the Trusts and lobbies on national issues on their behalf.

FARMING AND WILDLIFE ADVISORY GROUP seeks to promote conservation of wildlife and landscape in the farmed countryside to the fullest extent compatible with modern farming needs. It acts as an advisory service for farmers and landowners working through twelve local advisors in Scotland and 45 in England to make whole farm plans. FWAG is not a lobbying group.

FRIENDS OF THE EARTH is one of the few international environmental organisations. FoE has American roots and is based on promoting fundamental social change to solve man's abuses of the natural environment. FoE is seen to be quite radical and confrontational. The organisation is committed to the idea of developing strong, well-informed local groups and while each country group is independent they are bound together by a sense of common purpose.

GREENPEACE is one of the largest international environmental groups, characterised for its direct action, and is most well known for their work against international whaling. Greenpeace has traditionally been seen as a radical group with a highly centralised administration which distinguishes it from FoE.

NATIONAL FARMERS UNION (for SCOTLAND) The mission of the NFU(S) is to: *'watch over, protect and promote the interests of agriculture in all its branches and to encourage the development of the industry by such means as may from time to time be deemed expedient.'* The NFU(S) has been described as a trade union whose principal aim is to represent the financial interests of their members. The NFUS has become accepted as the authoritative voice of the farming industry in Scotland and likewise the NFU in England. The two groups are independent although they work together on common issues.

NATIONAL TRUST is one of the oldest conservation groups. The NT was established by social reformers in the late 19th century to promote the preservation of places of historic and architectural interest or of natural beauty. It is very centralised; decision-making rests with its council of approximately 50 members. The NT is a large landowner and seeks occasionally to reform policy. It has 'insider' status with the government because of its landowning status and has a conservative approach to conservation with a middle-class and middle-aged membership.

NATIONAL TRUST FOR SCOTLAND NTS is very influential across the board but it tends not to openly offer opinions on political issues and hence not seen to be politically active or influential.

RAMBLERS ASSOCIATION seeks to safeguard public rights of way and landscapes through government legislation, and the decisions of local planning authorities and highway authorities. The Ramblers seek to encourage all forms of rambling and mountaineering, and foster care and understanding of the countryside. Within Scotland there are 25 local groups and a total membership of approximately 4000 who are lobbying for increased public access to the countryside.

ROYAL SOCIETY FOR NATURE CONSERVATION is the umbrella organisation for the County Wildlife Trusts in England and has links with Scottish Wildlife Trust, who may rely on the RSNC at times to represent its interests at a national level.

ROYAL SOCIETY FOR THE PROTECTION OF BIRDS is concerned with the protection of wild birds and conservation of their habitat. RSPB have been very successful and has a narrower remit than, for example, WWF. RSPB is one of the largest conservation groups in Europe.

SCOTTISH CONSERVATION PROJECTS seek to promote the involvement of people in conserving the wildlife and scenic heritage of Scotland. It involves a wide cross section of the community in practical conservation work for both public and private landowners. Training courses in conservation skills are run. SCP is becoming more popular with membership now totalling 1200.

SCOTTISH CROFTERS UNION represents crofting interests in Scotland with a membership of 4500. They have formed a strong relationship with conservation groups, such as the RSPB, as a result of the recognition of the contribution crofting can make to conservation.

SCOTTISH LANDOWNERS FEDERATION mission is to *'promote high standards of management and use of land. To ensure proper communication on matters relating to the ownership of land between its members, other organisations and the wider public. To ensure that legislation and government policies affecting land ownership and use are prepared with proper consideration for the responsibilities and rights of landowners, in addition to the well-being of rural communities, the environment, and the wider public interest.'* SLF has a small membership but is influential because of its landowning status.

SCOTTISH WILDLIFE AND COUNTRYSIDE LINK (also known as Scottish Link or SWCL) aims to connect the wide range of voluntary wildlife, amenity and environmental protection groups in Scotland. Scottish Link does not represent anyone as such but rather offers a central point of contact and forum. Views expressed from within Scottish Link are always attributed to named organisations and there is no aim to integrate views or develop a consensus. Scottish Link has approximately 30 members. There are growing links between SWCL and WCL.

SCOTTISH WILDLIFE TRUST is affiliated to RSNC in England and seeks to protect native wildlife and its habitats throughout Scotland. It creates and manages nature reserves encouraging public interest in conservation providing education and advising landowners. They campaign on wildlife issues and run UK 2000 Employment Training Unit for Scotland. SWT tends to rely on RSNC, and WWF and RSPB in Scotland, to relay information about political issues in Westminster.

WILDLIFE AND COUNTRYSIDE LINK is an effective network organisation based in London, which is older and more established than SWCL.

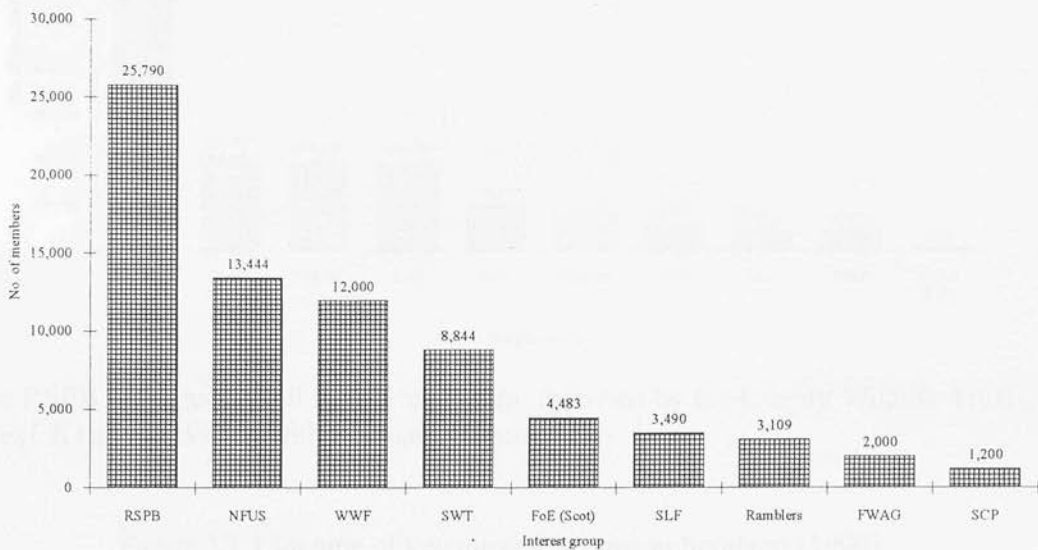
WORLD WIDE FUND FOR NATURE is a large international organisation which aims to generate moral and financial support for the conservation of nature and the earth's natural resources. Although the majority of its funds go abroad it is active in Scotland as an advocate of conservation. WWF is generally perceived to be very professional and influential.

Income and membership data on the above groups is presented in Appendix VI.

Appendix VI: Results

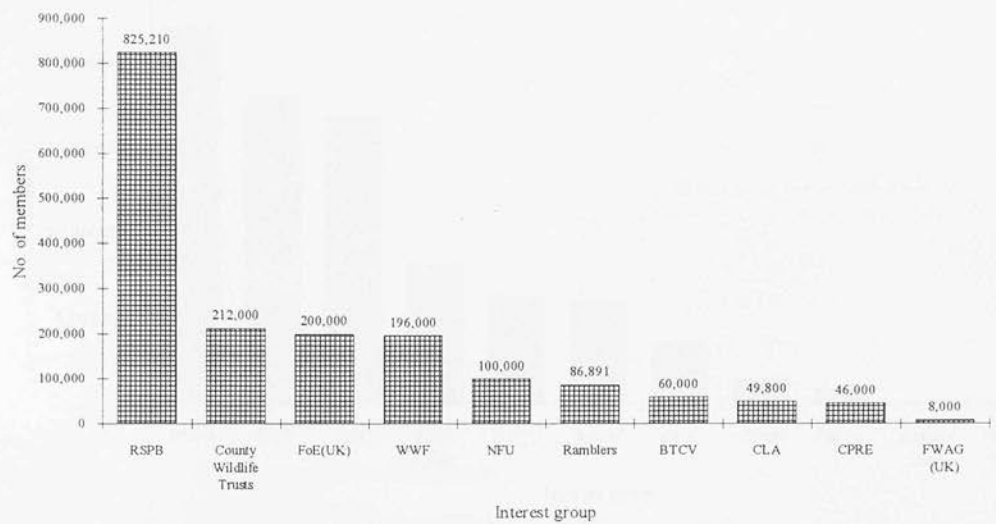
Figure VI.1 illustrates the relative volume of support for the key farming, landowning, environmental and conservation interest groups as identified in the literature review in Chapter 2 and through interviews with policy-maker respondents.

Figure VI.1 Membership of key interest groups in Scotland (1993)



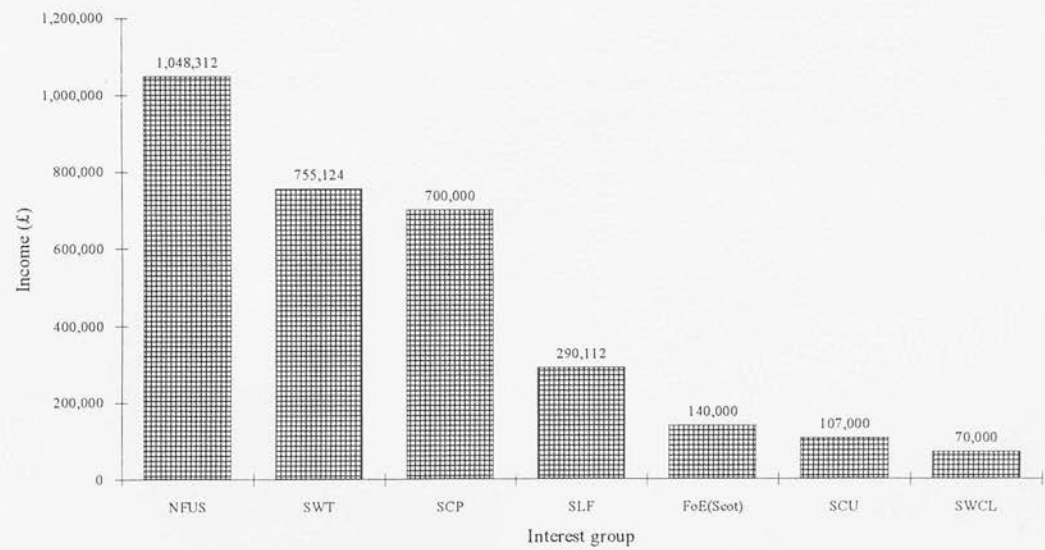
In terms of membership numbers, the RSPB are the most well supported interest group in Scotland, followed by the NFUS and WWF. The National Trust for Scotland, though considered to be an influential organisation (Evans, 1992) is not included as all the above memberships represent Scottish residential membership, while the NTS membership figure of 218,343 includes a wider UK membership, (and was therefore not a comparable statistic).

Figure VI.2 Membership of key interest groups outwith Scotland (1993)



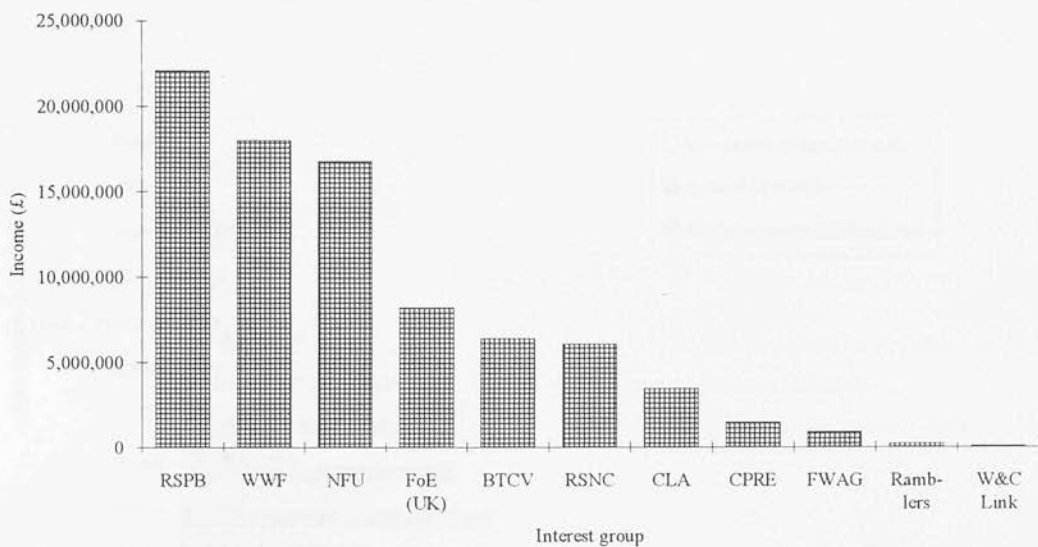
The RSPB is the most well supported group, followed by the County Wildlife Trusts, FoE(UK) and WWF outwith Scotland (Figure VI.2).

Figure VI.3 Income of key interest groups in Scotland (1990)



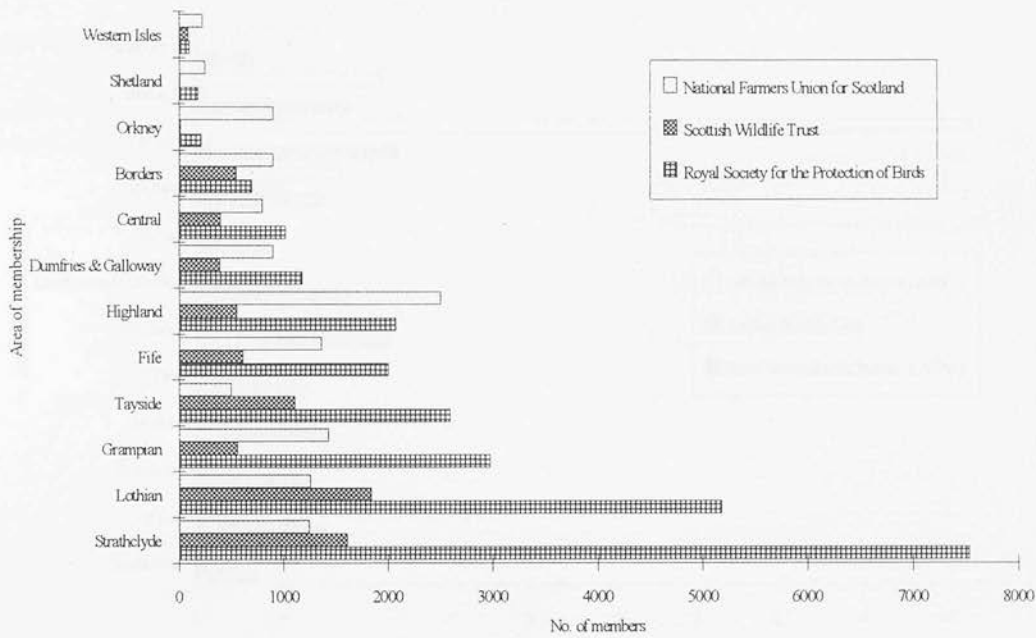
The NFUS, SWT and SCP have the largest incomes of the groups shown above (Figure VI.3). RSPB and WWF are not included as their incomes are collected at their UK headquarters.

Figure IV.4 Income of key interest groups in the UK, outwith Scotland (1990)



The above diagram illustrates the relative size of interest groups in terms of income. The RSPB and WWF have the largest incomes. Figures VI.1 - VI.4 illustrate that group memberships are in the same order of magnitude as their incomes.

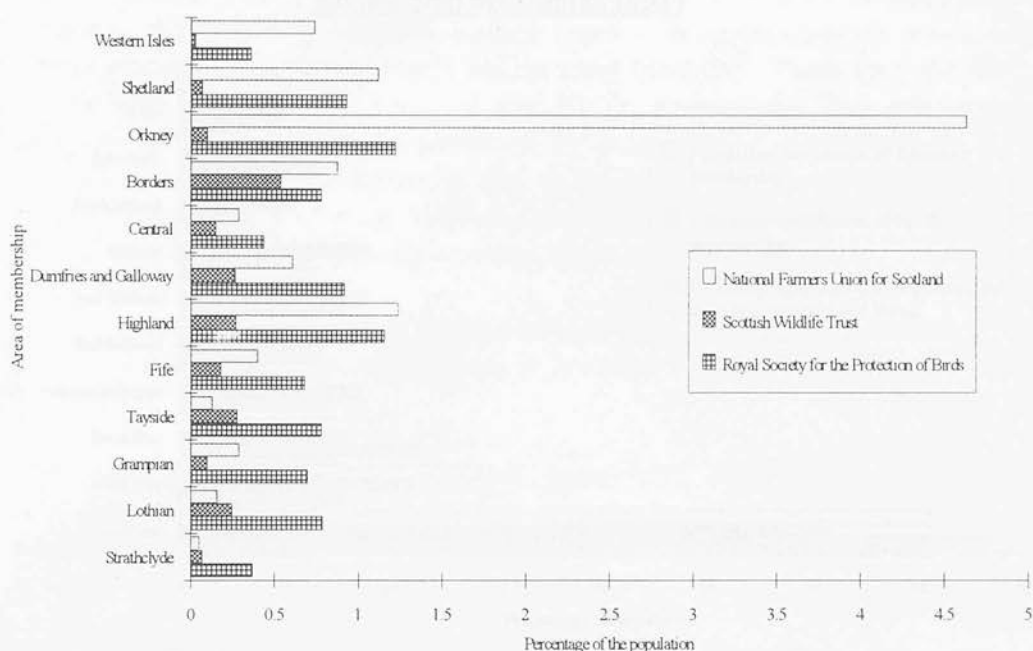
Figure VI.5 Geographical distribution of membership of key interest groups within Scotland (1991).



Source: RSPB (pers comm 1993), SWT (1990) and NFUS (pers comm).

There exists a relatively even geographical distribution of NFUS membership (Figure VI.5). However, there is a clear concentration of members of SWT and RSPB in centres of population such as, Lothian, Strathclyde, Grampian and Tayside. In order to account for these concentrations of population the distribution of membership has been calculated on a per capita basis. These results are illustrated in Figure VI.6 below. All three groups were shown to have a relatively even geographical distribution of membership per capita.

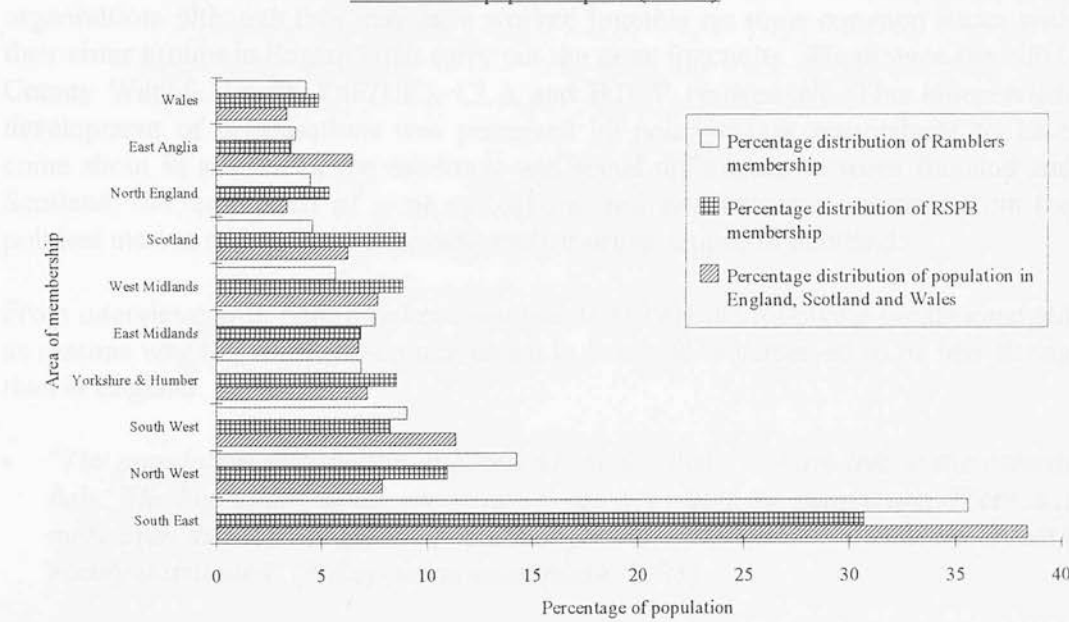
Figure VI.6 Geographical distribution of membership in Scotland per capita of RSPB, SWT and NFUS (1991).



There was a substantially higher proportion of NFUS members per capita in Orkney than any other region in Scotland. RSPB has the highest per capita membership for 7 regions followed by the NFUS which has the highest membership for 5 regions. Membership per capita of SWT remains the lowest, at less than 0.5% of the population. The difference between RSPB and SWT membership in Orkney and Lothian is 0.4% and 0.2% respectively. This shows that urban residents in Scotland were no more likely to be members of environmental and conservation interest groups than rural residents. However, there is an absolute concentration of membership in urban areas which acts as a locus of influence.

Geographical distribution of key interest groups outwith Scotland

Figure VI.7 Geographical distribution of UK population and RSPB and Ramblers' membership per capita (1991)



The RSPB and the Ramblers were chosen as representative organisations of conservation interests in the UK as they are widely recognised groups with very high memberships. Figure VI.6 illustrates the geographical distribution of the UK population which has a clear concentration in the South East of England. The distribution of membership of RSPB and the Ramblers corresponds with these geographical variations in population. However, there is a substantial concentration of membership in the South East of England which provides a locus of influence for interest groups. The membership of Ramblers and the RSPB in Scotland is not considerably lower than in many areas of England including Yorkshire and Humberside, the South West, West Midlands, and it was even higher overall than in East Anglia.

In 1991 3% of RSPB's¹ membership was in Scotland. Distribution within Scotland was relatively even, (approximately 0.7% of Scotlands population in each region was a member of RSPB). Approximately 97% of RSPB's membership was in England, Wales and NI. Geographical distribution in England is relatively even, (approximately 1.6% of the rest of the UK's population in each region is a member of RSPB).

These figures imply that the population in Scotland is marginally less likely to be a member of conservation and environmental groups than the population outwith Scotland.

¹ RSPB is used as an indicator group for conservation interests

Comparison of interest groups between England and Scotland

The RSPB, WWF, Ramblers, and FWAG all have Scotland offices but remain a part of their UK offices. The NFUS, SWT, FoE(S), SLF and SCP were all independent organisations although they may have worked together on some common issues with their sister groups in England that carry out the same functions. These were the NFU, County Wildlife Trusts, FoE(UK), CLA and BTCV respectively. This independent development of organisations was perceived by policy-maker respondents to have come about as a result of the economic and social differences between England and Scotland, the remoteness of some agricultural and environmental interests from the political market and the desire for independent organisations in Scotland.

From interviews with policy-maker respondents (1993) the following points emerged as reasons why the conservation movement in Scotland is perceived to be less strong than in England.

- *"The population distribution in Scotland [means that] 75-80% live in the central belt. The big nature conservation issues are not where the people are. There is a more even distribution [of the population] south of the border so concern is more evenly distributed"* (Policy-maker respondent, 1993).
- *"There has been very high unemployment in Scotland for a very long time so substantial numbers of people don't give a fig. There is no large leisurely middle-class (not large enough to indulge themselves) so [there exists] only a modest basis for influence and support. A small population means the same individuals support a number of organisations which include, for example, NTS, SWT and RSPB"* (Policy-maker respondent, 1993).
- *"In Scotland the perception is that the environment is not under threat. There is more countryside per head of population and therefore the impact on the natural environment is relatively less. There is not a similar perception of 'habitat islands' needing protection in the way there is in the more densely populated areas in England"* (Policy-maker respondent, 1993).
- *"The historical tradition of voluntary organisation in England is much older than in Scotland"* (Policy-maker respondent, 1993).

- The holistic approach to the environment was perceived to be characteristic of Scottish people. This was illustrated in the following quotations:

"Environmental group membership is much lower in Scotland perhaps because the Scots have a more holistic view - they couldn't respond to something just about nature. The National Trust for Scotland therefore has an advantage" (Policy-maker respondent, 1993).

"Scottish people do not separate out culture aspects of their environmental concern. It is more holistic than that which is why the National Trust for Scotland gets support. NTS provides a vacuum for the sense of identity in Scotland which is stronger than in the South. There is sentimental notion of the glens and Beinnns which does not exist in England" (Policy-maker respondent, 1993).

- The lower overall membership in Scotland means that there is significantly less public pressure in Scotland to achieve conservation or environmental objectives and therefore less pressure on farming and landowning groups to accommodate conservation and environmental interests. By contrast, the public pressure in England comes from a more established environmental movement which further contributes to its influence.
- Many respondents believed there is a greater rural empathy with the farming and landowning populations in Scotland. This occurs for many social and economic reasons but mainly due to a higher, relative dependence on the agriculture industry for local employment. (1.2% of the working population in England are employed in agriculture; 1.4% of employees of the population in Scotland are in agriculture. Therefore the direct employment dependence in Scotland is 18.2% more than in England (Source: Regional Trends, 1993 Table 7.7).